

Repair Manual

Audi A3 2013 ➤ , Audi TT 2015 ➤ , Audi Q2 2016 ➤ , Audi Q3 2019 ➤ , Audi A1 Sportback 2018 ➤

7-Speed Dual Clutch Transmission 0GC

Edition 10.2023



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# List of Workshop Manual Repair Groups

### Repair Group

00 - General, Technical Data

30 - Clutch

34 - Controls, Housing

35 - Gears, Shafts

39 - Final Drive, Differential



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Technical information should always be available to the foremen and mechanics, because their careful and constant adherence to the instructions is essential to ensure vehicle road-worthiness and safety. In addition, the normal basic safety precautions for working on motor vehicles must, as a matter of course, be observed.

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# General, Technical Data

# Identification

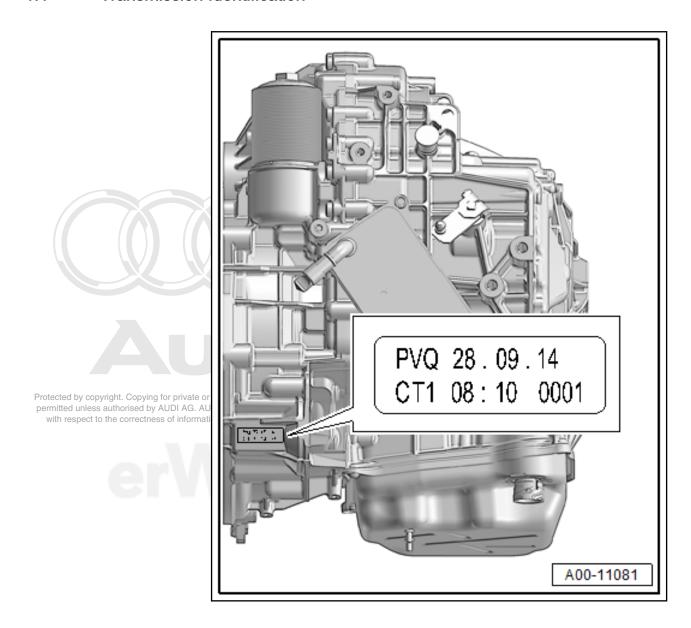
(Edition 10.2023)

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⇒ "1.1 Transmission Identification", page 1

⇒ "1.2 Bevel Box Identification", page 2

#### 1.1 Transmission Identification



The transmission code is located on the top of the transmission.

# Example

- ♦ PVQ = Transmission code
- 28.09.14 = production date September 28, 2014.
- The rest of the dates depend on manufacturing.

#### Note

♦ The transmission code is also on the vehicle data labels.

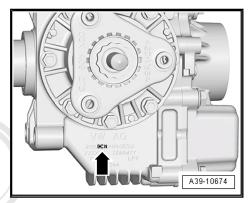
Vehicle Data Label Component Location:

- A3/S3. Refer to ⇒ Maintenance; Booklet 821; General Information; Vehicle Data Label .
- TT. Refer to ⇒ Maintenance; Booklet 826; General Information; Vehicle Data Label .
- Q2. Refer to ⇒ Maintenance; Booklet 840; General Information; Vehicle Data label .
- Q3. Refer to > Maintenance; Booklet 502; General Information; Vehicle Data Label .

#### 1.2 **Bevel Box Identification**

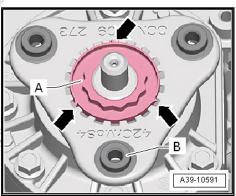
Pay attention to the different versions of the bevel box:

The name can be read on the bevel box -arrow-.

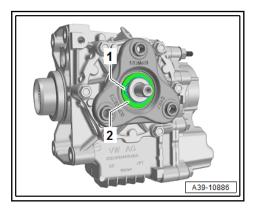




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- Bevel box "0CN": The output flange is attached with a twelve-point nut.
- Bevel box "0AV" and "0FV": The output flange is attached with a hex nut.
- Bevel box "0FN": The output flange is attached with a circlip.
- Pay attention to the capacity. Refer to ⇒ "2.1 Capacities", page 3



#### 2 **Technical Data**

# ⇒ "2.1 Capacities", page 3

#### 2.1 Capacities

Capacities	FWD Dual-Clutch Transmission 0GC	quattro Dual-Clutch Transmission 0GC
Refill	6.9 liters	6.9 liters
Change	Approximately 6 to 6.4 liters	Approximately 6 to opy 6.4 liters ted unless
Change Interval	Refer to the ⇒ Maintenance Tables .	Refer to the ⇒ Main- tenance Tables .
Grease	Dual-clutch transmission oil. Refer to the ⇒ Electronic Parts Catalog (ETKA).	Dual-clutch transmission oil. Refer to the ⇒ Electronic Parts Catalog (ETKA).



- Check the transmission fluid level land fill. Refer to ≥ "9.3 Transmission Fluid Level, Checking", page 108.
- Fill the transmission fluid after repairs. Refer to ⇒ "9.4 Transmission Fluid, Draining and Filling", page 111

Capaci- ties	Bevel box 0CN	Bevel box 0FN	Bevel box 0AV	Bevel box 0FV
Refill	860 ml	750 ml	890 ml	875 ml
Change	Approxi- mately 720ml	Approxi- mately 600 ml	Approxi- mately 750 ml	Approxi- mately 730 ml
Change Interval	Permanent fill no change necessary	Permanent fill no change necessary	Permanent fill no change necessary	Permanent fill no change necessary
Grease	Gear oil. Refer to the ⇒ Electron- ic Parts Catalog (ETKA).	Gear oil. Refer to the ⇒ Electron- ic Parts Catalog (ETKA) .	Gear oil. Refer to the ⇒ Electron- ic Parts Catalog (ETKA).	Gear oil. Refer to the ⇒ Electron- ic Parts Catalog (ETKA) .

- Check the gear oil level. Refer to ⇒ "3.1 Gear Oil, Checking Level", page 124.
- Fill the gear oil after repairs. Refer to ⇒ "3.2 Gear Oil, Draining and Filling", page 124

# 3 Safety Precautions

- ⇒ "3.1 General Safety Precautions", page 4
- ⇒ "3.2 Safety Precautions when Working on Vehicles with Start/ Stop System", page 4
- ⇒ "3.3 Safety Precautions during Road Test with Testing Equipment", page 5
- ⇒ "3.4 Safety Precautions when Tow Starting and Towing", page 5

# 3.1 General Safety Precautions

#### Risk of accident due to vehicle rolling

When performing work on the vehicle, it should generally be secured to prevent rolling.

- Automatic transmission/dual clutch transmission: select the "P" selector lever position.
- Manual transmission: select 1st gear.
- Engage the parking brake.

#### Risk of destroying the electronic components.

Risk of destroying electronic components when disconnecting the battery.

Always turn off the ignition before disconnecting the battery.

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- ♦ Only connect and disconnect test equipments when the ignit by AUDI AG. AUDI AG does not guarantee or accept any liability tion is off.
- Disconnect the battery. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery, Disconnecting and Connecting.

# 3.2 Safety Precautions when Working on Vehicles with Start/Stop System

There is a risk of injury if the internal combustion engine starts unexpectedly.

The engine can start unexpectedly when the Start/Stop System is activated on the vehicle. Risk of pinching and pulling parts of the body.

- Turn off the ignition and all electric equipment.
- Place the vehicle key and other start authorization systems (such as smartphones) outside of the vehicle interior.



#### 3.3 Safety Precautions during Road Test with Testing Equipment

# There is a risk of injury due to unsecured testing equipment.

If the front passenger airbag unit deploys during a collision, testing equipment that is not secured correctly will be throw around the passenger compartment and endanger vehicle occupants.

- Secure testing equipment on the rear seat.
- Have a second person operate testing equipment on the rear seat. Permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability
- In vehicles with two seats, the front passenger airbag should be deactivated and the front passenger seat should be moved as far back as possible.

#### 3.4 Safety Precautions when Tow Starting and Towing

### Risk of damaging the transmission.

It is possible to damage the transmission by towing the vehicle improperly.

- Place the selector lever in the "N" position to tow the vehicle.
- When towing, do not drive faster than 50 km/h (31.1 mph) and do not drive over 50 km (31.1 miles).

# Audı

# 4 Repair Information

- ⇒ "4.1 General Information", page 6
- ⇒ "4.2 Guidelines for Clean Working Conditions", page 6
- ⇒ "4.3 General Repair Information", page 7
- ⇒ "4.4 Contact Corrosion", page 8

### 4.1 General Information

#### **Transmission Fluid**

The dual-clutch transmission "OGC" contains only one oil system

This oil system applies to the wheels/shafts, the final drive, the clutches and the Dual-Clutch Transmission Mechatronic - J743- .

Only use transmission fluid as specified in the ⇒ Electronic Parts Catalog (ETKA)

#### Transmission Fluid Filter - »When To Change«

 The transmission fluid filter does not need to be replaced in every case.

Do not replace the filter if:

- The transmission fluid cooler or its O-rings were replaced and no coolant has entered the transmission fluid.
- The shaft seals or transmission O-rings were replaced.
- The transmission fluid pan or Mechatronic were replaced.
- ♦ The maintenance interval was reached.

The filter must be replaced if:

- Metal shavings were found in the transmission fluid.
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  The clutch is burned or ehas a mechanical fault AUDI AG does not guarantee or accept any liability
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# 4.2 Guidelines for Clean Working Conditions

- Thoroughly clean connection points and their surrounding areas with engine or brake cleaner before loosening and allow the cleaned connection points to dry completely.
- ♦ Clean the transmission and transmission components using Cleaning Solution D 009 401 04- .
- Use lint-free cloths for cleaning, for example, the "WYPALL X70/WORKHORSE" cloth made by Kimberly-Clark Professional.
- Seal all open lines and connections immediately with clean plugs or caps from the Engine Bung Set - VAS 6122-.
- Place the removed parts on a clean surface and cover them.
   Use foil and paper. Only use lint-free cloths.
- Carefully cover or seal opened components if the repair will not be done immediately.
- Only install clean parts: remove the replacement parts from their packaging just before installing them.
- Protect the disconnected connectors from dirt and moisture and only connect when they are dry.

#### 4.3 **General Repair Information**

- The highest level of care and cleanliness along with tools that function properly are required to ensure a proper and successful transmission repair. Of course the general safety precautions also apply when carrying out repair work.
- Some general repair information that applies to several procedures throughout this manual is summarized here. They apply to this repair manual.

#### Guided Fault Finding, OBD and Test Instruments

Determine the cause of the malfunction as accurately as possible using Guided Fault Finding, OBD and Test Instruments before starting any repairs on the transmission using the ⇒ Vehicle diagnostic tester.

#### **Special Tools**

For a complete list of special tools used in the repair manual, refer to Workshop Equipment and Special Tools.

#### Oil, Environmental and Disposal Regulations

- Handle transmission fluid, gear oil and other fluids with care.
- Dispose of drained fluid properly.
- Follow the legal, environmental, and disposal regulations.
- Follow the instructions listed on the fluid packaging.

#### **Transmission**

- Do not run the engine or tow the vehicle when the transmission fluid pan is removed or when there is no transmission
- Thoroughly clean the connection points and the surrounding area before loosening.
- ◆ During installation, make sure the alignment sleeves are fitted correctly.

#### O-rings, shaft seals, seals

- Always replace the O-rings, shaft seals and seals.
- After removing the seals, examine the contact surface on the housing or shaft for burrs resulting from removal or for other signs of damage.
- Thoroughly clean the housing separating surfaces before assembling.
- Always replace paper gaskets, completely remove an old seal and thoroughly clean the sealing surfaces.
- When installing shaft seals, apply transmission fluid to the outer edge and sealing lip.
- Coat the O-rings with transmission fluid or Vaseline before inserting to prevent them from being crushed during assembly.
- ◆roiDocnotouseranypotherplubricants in the transmission of luids not erareaur@therwisettheretissa\dangereoftheehydraulietransmission control malfunctioning.
- The open side on the shaft seals faces the fluid to be sealed
- Press in new shaft seal, so that the sealing lip does not run on the same point as the sealing lip of the old shaft seal (use offset tolerance).

◆ Follow the guidelines for clean working conditions. Refer to ⇒ "4.2 Guidelines for Clean Working Conditions", page 6.

#### Circlips

- Do not stretch the circlips.
- Replace damaged or stretched circlips.
- The circlips must rest at the bottom of the groove.

#### **Bolts and Nuts**

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- ◆ petroosenetherbolts opposite the tightening sequence of any liability with respect to the correctness of information in this document. Convided by ALIDLAG
- Nut and bolts from covers and housings should be loosened and tightened diagonally and in stages if no tightening sequence is specified.
- Replace the self-locking nuts.
- Use a wire brush to clean the threads of the bolts that were installed with locking fluid. Then insert the bolts with Locking Fluid - AMV 185 101 A1-.
- Use a thread cutter to clean all threaded holes containing self-locking bolts to remove any locking compound residue. Otherwise the bolts could shear the next time they are removed.
- Please make sure that the thread pitch is correct so that the proper thread cutter is used during cleaning, and the thread does not get damaged.
- The tightening specifications given apply to unoiled bolts and nuts.

#### **Electrical Components**

Due to the build-up of static electricity in the human body, a person can receive an electric shock when metal objects are touched.

This charge can damage the electrical/electronic components of the transmission and the selector mechanism when touching them.

 Touch a grounded object such as a washer fluid hose or a hoist before working on electrical/electronic components.
 Do not touch connector terminals or »open« electronic components directly.

#### 4.4 Contact Corrosion

Contact corrosion can occur if inadequate fasteners (bolts, nuts, washers, etc.) are used.

For this reason, only fasteners with a special surface coating may be installed.

Furthermore, only rubber/plastic parts and adhesive made of electrically non-conductive materials are used.

If there are doubts about whether parts can be used or not, use new parts. Refer to the ⇒ Electronic Parts Catalog (ETKA) .

#### Note:

- Only original replacement parts are recommended. They are checked and are compatible with aluminum.
- ♦ The use of Audi accessories is recommended.
- Contact corrosion damage is not covered under warranty.

#### Clutch 30 –

# Clutch

- ⇒ "1.1 Overview Dual Clutch", page 9
- ⇒ "1.2 Clutch End Cover, Removing and Installing", page 9
- ⇒ "1.3 Dual Clutch, Removing", page 13
- ⇒ "1.4 Dual Clutch, Installing page 0 G does not guarantee or accept any liability document. Copyright by AUDI AG.

### Overview - Dual Clutch

#### Replacement part package

#### 1 - Circlip for Dual Clutch End Cover

- □ Replace after removing
- 2 Dual Clutch Circlip
- 3 Drive Plate Circlip

#### 4 - Dual Clutch

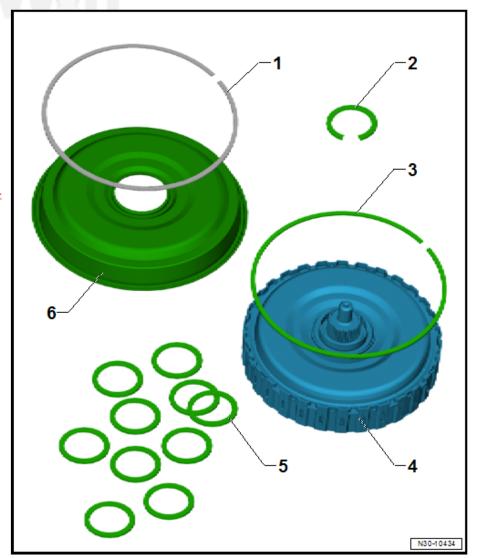
- □ Removing. Refer to ⇒ 1.3 Dual Clutch, Removing", page 13
- □ Installing. Refer to ⇒ 1.4 Dual Clutch, Installing", page 16

#### 5 - Spacer Rings

- 10 spacer rings of different strengths. Graduation in 0.05 mm steps
- When installing the dual clutch, the strength of the spacer ring must be determined.

#### 6 - Dual Clutch End Cover

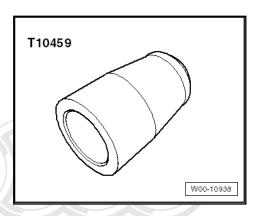
- □ Replace after removing
- Refer to ⇒ "1.2 Clutch End Cover, Removing and Installing", page



#### 1.2 Clutch End Cover, Removing and Installing

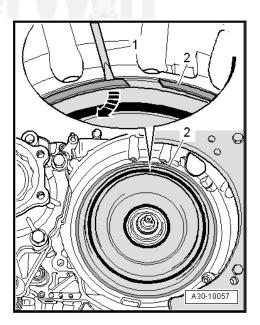
Special tools and workshop equipment required

Assembly Sleeve - T10459-



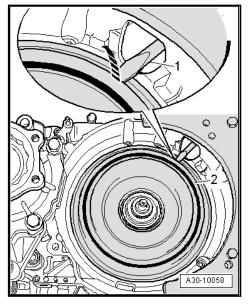
#### Removing

- The cover and the circlip must always be replaced.
- Drain the transmission fluid. Refer to ⇒ "9.4 Transmission Fluid, Draining and Filling", page 111.
- Remove the transmission. Refer to ⇒ "3.1 Transmission, Removing", page 53. Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability
- Secure the transmission vertically to the engine and trans-the correctness of information in this document. Copyright by AUDI AG. mission holder. Refer to <u>⇒ "7 Securing on Engine and Trans-</u> mission Holder", page 97
- Replace the transmission fluid filter. Refer to ⇒ "8.3 Transmission Fluid Filter, Removing and Installing", page 102.
- Pry out the circlip -2- for the clutch end cover with a screwdriver -1- -arrow- and remove.



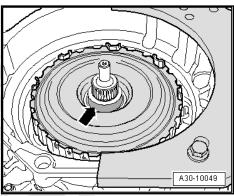


- Remove the clutch end cover -2- with a screwdriver -1- or a tire iron -arrow- through the side opening in the housing and then remove the clutch end cover.
- The removed clutch end cover and the circlip may not be installed again.



### Installing

- Replacing clutch end cover and circlip.
- Thoroughly grease the contact surface for the seal from the clutch end cover -arrow-.

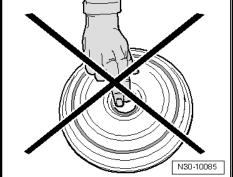


Clean the contact surfaces for the outer seals of the clutch end cover.

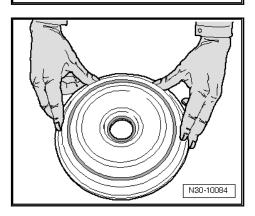


Risk of leaks on the clutch end cover. Transmission damage due to oil loss.

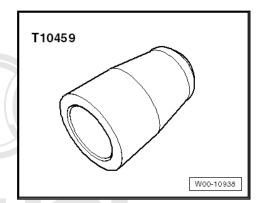
- Do not touch the seal in the inner opening of the clutch end cover!
- Do not load the clutch end cover by hitting with a hammer.



- Only handle the clutch end cover as shown -in this illustration-!
- Do not apply any stickers to inside of the clutch end cover. If there is a sticker carefully remove it.

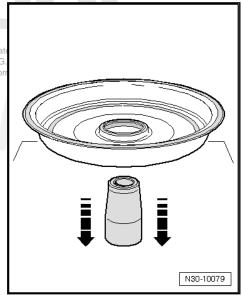


Degrease and clean the Assembly Sleeve - T10459- before using; do not use scratched sleeves.



- Place the Assembly Sleeve T10459- on a level surface.
- Guide the clutch end cover horizontally and evenly over the entire Assembly Sleeve - T10459- . This brings the sealing lip into its installation position.

  This brings the sealing protected by copyright. Copyright Co permitted unless authorised by AUDI AG with respect to the correctness of info



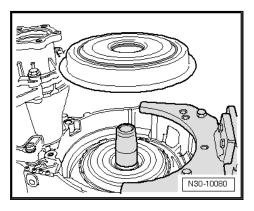
- Remove the Assembly Sleeve T10459- upward out of the cover and place it on the clutch shaft end.
- Coat the outer cover seal with oil.

# NOTICE

Risk of leaks on the clutch end cover.

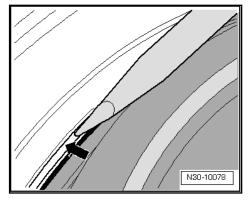
Transmission damage due to oil loss.

- Do not touch the seal in the inner opening of the clutch end cover!
- Do not load the clutch end cover by hitting with a hammer.
- Guide the cover horizontally over the Assembly Sleeve -T10459- and press it evenly onto its seat.

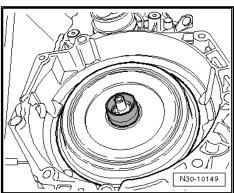


It is possible to carefully pry the cover into its place using a -screwdriver-, until the »new« circlip can be installed.

- Install the new circlip.



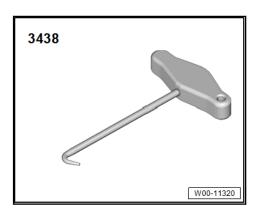
- Only remove the Assembly Sleeve T10459- after the circlip is installed.
- Install the transmission. Refer to <u>⇒ "3.2 Transmission, Instal-</u> ling", page 77
- Fill the transmission fluid. Refer to ⇒ "9.4 Transmission Fluid, Draining and Filling", page 111



#### 1.3 **Dual Clutch, Removing**

Special tools and workshop equipment required

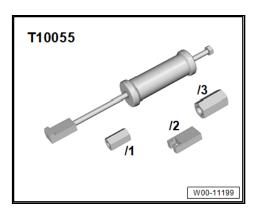
◆ T-Handle Hook - 3438- (quantity: 2)



Puller - Unit Injector - T10055-

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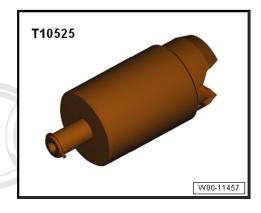




Retaining Bar - T10524-



♦ Puller - T10525-



#### Removing

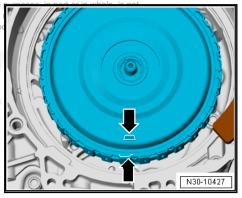
- Secure the transmission vertically to the engine and transmission holder. Refer to ⇒ "7 Securing on Engine and Transmission Holder", page 97.
- Remove the clutch end cover relative to the cover of the

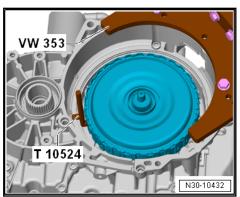
#### Important! Installation position of the drive plate

 Check if the mark on the drive plate -arrow- aligns with the mark on the outer clutch plate carrier.

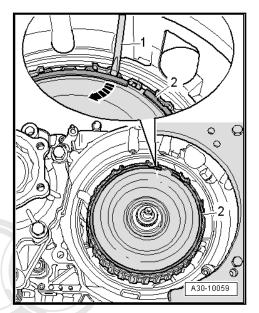
#### If no marking is present:

- Mark the location of the drive plate to the outer clutch plate carrier circumference with a waterproof marker as shown.
- When installing, the drive plate must be placed back on this marked location.
- Insert the Retaining Bar T10524- .





Pry out the drive plate circlip -2- with a screwdriver -1--arrow-.

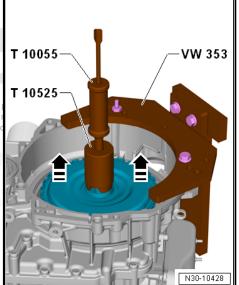


Place the Puller - T10525- with Puller - Unit Injector - T10055- on the splines and carefully drive out the drive plate from its seat -arrows-.

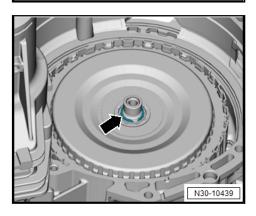
#### Tip

Secure the circlip from jumping away. The circlip can fall through an opening into the inner transmission.

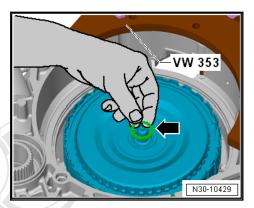
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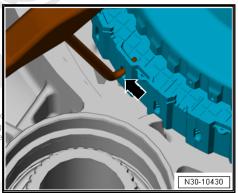
- Remove the circlip -arrow- and store it for the time being.
- Do not dispose of the circlip yet it is needed to measure the axial play.



Remove the shim -arrow-.



Hook the two T-Handle Hook - 3438- oppositely in the clutch -arrow-.

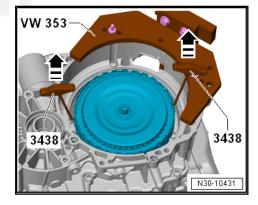


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- Remove the dual clutch using the T-Handle Hook 3438-
- Carefully remove the dual clutch. Make sure that no other parts of the clutch fall out; for this reason, never turn over the clutch!

### Installing

Installing the dual clutch. Refer to ⇒ "1.4 Dual Clutch, Installing", page 16



#### 1.4 **Dual Clutch, Installing**

#### Tip

- The drive plate must remain engaged between the teeth of the outer clutch plate carrier.
- If the drive plate is loosened, the clutch plates in the dual clutch can slip out of place. The dual clutch may not be correctly set during installation under certain circumstances.

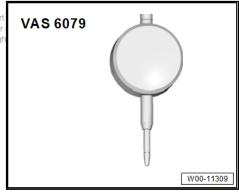
#### Special tools and workshop equipment required

◆ Dial Indicator Holder - VW 387-



♦ Dial Indicator - 0-10mm - VAS 6079-

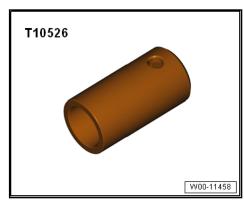
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♦ Retaining Bar - T10524-

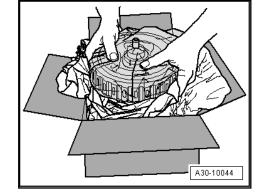


♦ Thrust Piece - T10526-

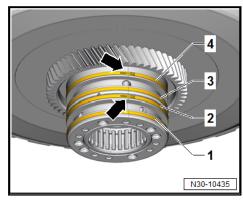


#### Installing

- Use special caution when removing the dual clutch from the packaging.
- Do not remove or lift the clutch pack, not even a small amount. The clutch plates can rotate themselves.

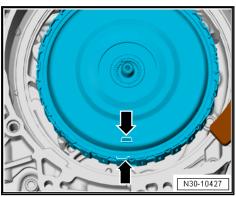


- Turn the piston ring by hand. They must move freely and must not stick.
- Pay attention that the piston rings -1, 2, 3 and 4- are seated correctly. The ends of the ring -arrows- and the piston rings -2- and -4- must align with each other.
- The ends of the ring -arrows- of the piston rings -2- and -4should be 180° offset to the ends of the ring of the piston rings -1- and -3- and align.



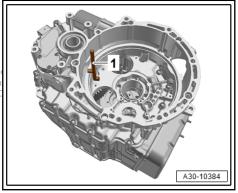
#### Important! Drive plate position

- Before installing check if a mark -arrow- is on the dual clutch.
- If no mark is present, apply a color coding of the drive plate and on the outer clutch plate carrier with a waterproof pen.

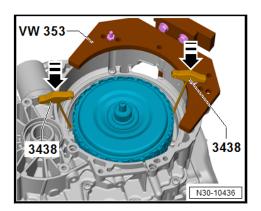


- Insert the Retaining Pin T10524- -1-.
- A second technician should hold the Retaining Pin T10524when inserting the dual clutch.

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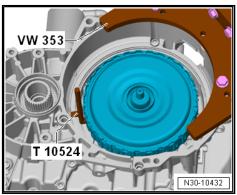


- Carefully insert the dual clutch do not let it fall.
- If necessary insert by lightly turning the clutch.

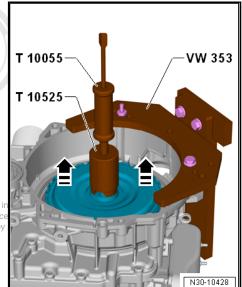


The dual clutch is in the correct installation position when the Retaining Pin - T10524- has very little play.

- The retaining pin remains there until clutch end cover is installed.
- Do not turn the dual clutch any further, otherwise the Retaining Bar - T10524- could be twisted in its position.
- Pry out the circlip using the drive plate.



- Place the Puller T10525- with Puller Unit Injector -T10055- on the splines and carefully drive out the drive plate from its seat -arrows-.
- The Retaining Pin T10524- must be held by a second technician when removing.
- Carefully remove the drive plate from the dual clutch -arrows- and move to the side.

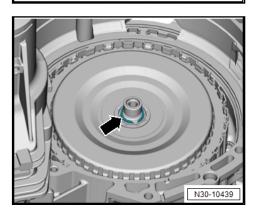


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### Determine the shim for the dual clutch:

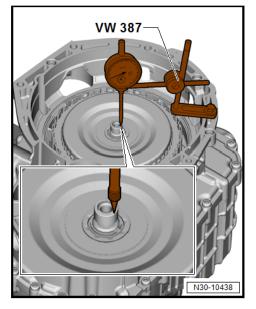
- The Retaining Bar T10524- remains inserted.
- Install the "old" circlip -arrow- temporarily.

Perform two measurements before removing the ring again.

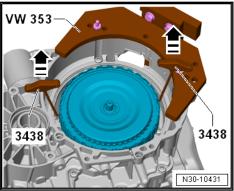


#### First measurement (axial play of the shaft)

- Install the Dial Indicator Holder VW 387- on the transmission flange.
- Place the -dial gauge button- on the input shaft.
- Adjust the -dial gauge- pretension to 0.



- Use the T-Handle Hook 3438- to lift the dual clutch forcefully upward -in the direction of the arrow- until it stops and note the measurement result.
- Name this value "A".
- The value is needed later for a measurement check for this reason retain the value "A" until the last measurement.





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#### Second measurement

- The Retaining Bar T10524- remains inserted.
- Place the gauge button -on the hub of the large clutch plate carrier-.
- The plunger must not rest on the circlip.
- Adjust the -dial gauge- pretension again to 0.
- Raise the double clutch upward sharply until stop and note the measurement.
- Name this value "B".

#### Now which shim will be installed is calculated:

- Use this formula for this:

Measured value "B" - measured value "A" - 0.11 = thickness Protected by copyright. Copying for private or commpermitted unless authorised by AUDI AG. AUDI AG of the shim to be installed

- Write down the measurement result. respect to the correctness of information in

The shims are staggered in 0.05 mm steps.

Measure the shim and determine the shim which comes the closest to the result.

#### Tip

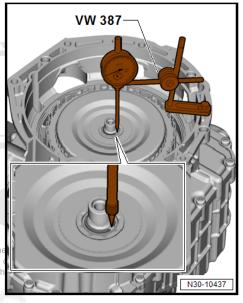
The next largest shim is always used, never install a smaller shim.

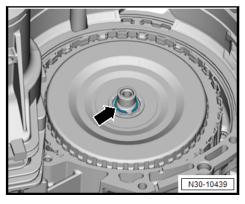
### Example:

Determined dimension of the shim	New shim
1.28 mm	1.3 mm
1.26 mm	1.3 mm

- Remove the old circlip -arrow-.

- Install the determines shim.



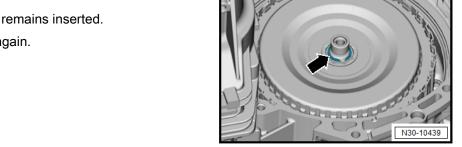




#### Measurement check

Another measurement check is performed to check the shim. To do so proceed as follows.

- The Retaining Bar T10524- remains inserted.
- Install the old circlip -arrow- again.



- Place the gauge button
   on the hub of the large clutch plate carrier.
- The test probe must contact the shim -1-.
- Adjust the -dial gauge- pretension again to 0.
- Raise the double clutch upward sharply until stop and note the measurement.
- Name this value "C".

#### Now which shim will be installed is calculated:

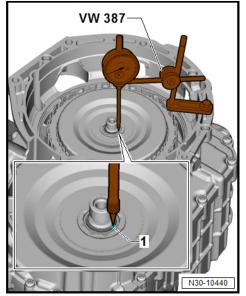
Use this formula for this:

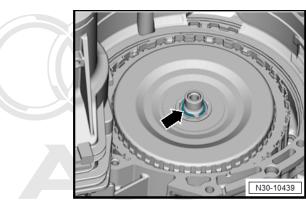
Measured value "C" - measured value "A" = specified value

The specified value must be between 0.05 to 0.12 mm.

If the specified value is not reached then reach the specified value by installing a thicker or thinner shim.

Install a new circlip -arrow-.



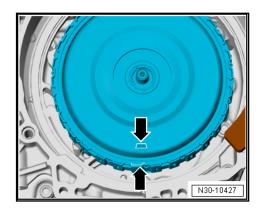


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- Insert the drive plate into the dual clutch.
- When installing pay attention that the mark on the drive plate aligns with the mark on the outer clutch plate carrier -arrows-. Make note of markings that have been changed retrospectively.
- Have a second technician hold the Retaining Bar T10524in its position and push it slightly outward.
- Using the Bearing Installer Differential Bearing 40-21- and a plastic mallet carefully drive the drive plate in its position.
- Install the new drive plate circlip.
- Push the circlip on the opening starting clockwise in the end position.
- The circlip must be completely engaged.
- Check the exact installation position of the circlip and that the circlip is engaged using a screwdriver.
- Now remove the Retaining Bar T10524- between the dual clutch and the housing.
- Install the clutch end cover. Refer to ⇒ "1.2 Clutch End Cover, Removing and Installing", page 9
- After installing the transmission, perform the basic setting using the Guided Functions using the ⇒ Vehicle Diagnostic Tester.





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# 34 – Controls, Housing

# 1 Mechatronic

- ⇒ "1.1 Overview Mechatronic", page 24
- ⇒ "1.2 Transmission Fluid Pan, Removing and Installing", page 25
- ⇒ "1.3 Mechatronic, Removing and Installing", page 28

### 1.1 Overview - Mechatronic

#### 1 - Transmission

#### 2 - Dual-Clutch Transmission Mechatronic - J743-

□ Removing and Installing. Refer to ⇒
"1.3 Mechatronic, Removing and Installing",
page 28.

### 3 - Bolt

- ☐ Tightening sequence.
  Refer to ⇒ Fig. "" Dual-Clutch Transmission
  Mechatronic -J743 Tightening specification
  and sequence"", page
  25.
- ☐ Replace

#### 4 - Seal

Replace

### 5 - Bolt

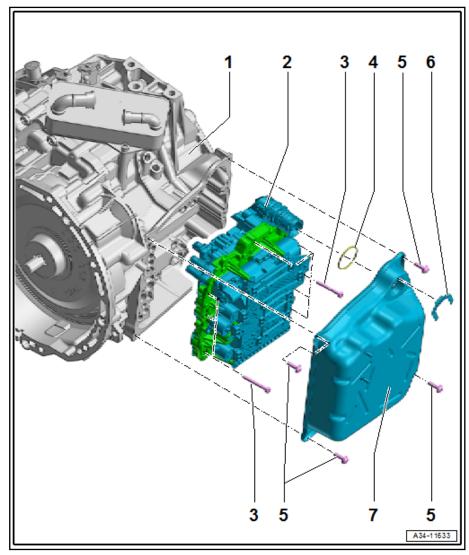
- □ 8 Nm + 60°
- □ Replace

#### 6 - Clip

□ Replace

## 7 - Transmission Fluid Pan

- Removing and Installing. Refer to ⇒
   "1.2 Transmission Fluid Pan, Removing and Installing", page 25
- □ Replace after removing

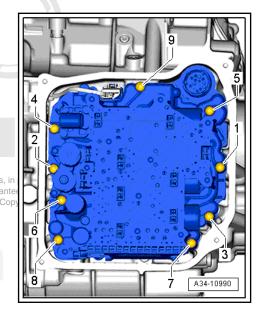




#### Dual-Clutch Transmission Mechatronic - J743- - Tightening specification and sequence

- Replace bolts that were tightened with an additional turn after removing them.
- Tighten the bolts in the steps in the sequence shown:

Step	Bolts	Tightening Specification/Additional Turn	
1.	-1 to 9-	Install all the way by hand	
2.	-1 to 9-	8 Nm	ose
3.	-1 to 9- pe	45% additional turn AUDI AG. AUDI AG does not p	uai



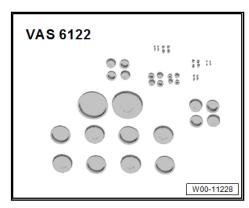
#### 1.2 Transmission Fluid Pan, Removing and Installing

#### Special tools and workshop equipment required

◆ Used Oil Collection and Extraction Unit - SMN372500-



♦ Engine Bung Set - VAS 6122-



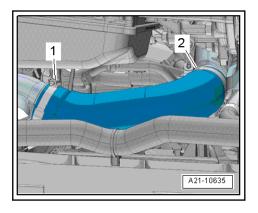
## Removing

- Pay attention to Refer to ⇒ "4 Repair Information", page 6.
- Pay attention to Refer to ⇒ "4.2 Guidelines for Clean Working Conditions", page 6
- Remove the one piece or front noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview -Noise Insulation .

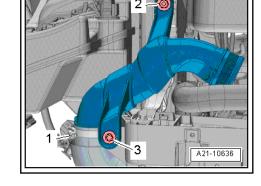
Loosen the left front wheel housing liner in the front area and push it to the side. Refer to  $\Rightarrow$  Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Overview - Front Wheel Housing Liner.

#### A3:

- Loosen the clamps -1- and -2- and remove the air guide hose.
- Seal the open lines and connections with clean plugs from the Engine Bung Set - VAS 6122- .



- Remove the nut -2- and bolt -3-.
- Loosen the clamp -1-, and remove the air duct pipe.
- Seal the open lines and connections with clean plugs from the Engine Bung Set - VAS 6122- .



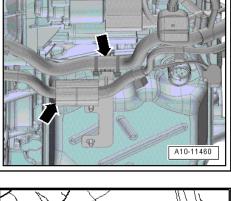
#### All Vehicles:

- Free up the wiring harnesses -arrows-.
- Drain the transmission fluid. Refer to ⇒ "9.4 Transmission Fluid, Draining and Filling", page 111



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- Do not touch the connector terminals: this document. Copyright by AUDI AG.
- Touch a grounded object (for example the hoist) and discharge any static electricity.
- Turn the screw counter-clockwise and disconnect the connector -arrow- and remove.



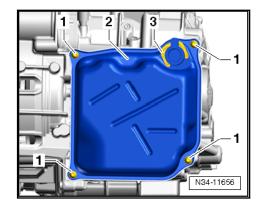


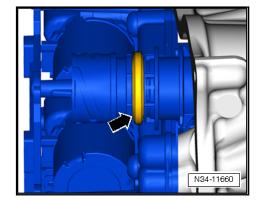
- Place the Used Oil Collection and Extraction Unit -SMN372500- under the transmission.
- Remove the clamp -3-.
- Loosen and remove the screws -1- in a diagonal sequence.
- Remove the oil pan -2- and if necessary loosen the oil pan by hitting lightly with a rubber hammer.

#### Installing

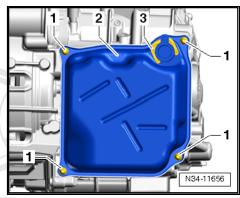
Install in reverse order of removal. At the same time note the following:

- Replace the oil pan, oil pan bolts, clamp and seal after removal.
- Clean the sealing surface on the transmission housing of oil and grease.
- Tape off the connector for the mechatronic with cloth tape. so that the seal on the shape of the connector is not damaged when removing.
- Place the O-ring -arrow- on the connector and coat it with transmission fluid.
- Remove the rest of the adhesive tape. There may be no residue present in the seal area.





- Position the new oil pan -2- and tighten the new bolts -1diagonally in multiple steps.
- When positioning oil pan, ensure the wires are not pinched.
- Install the new clamp -3-.
- The offset side of the clamp points to the transmission.
- Attach and lock the mechatronic connector on the transmis-
- Install the air duct pipes and air duct hoses. Refer to ⇒ Engine Mechanical; Rep. Gr. 21; Charge Air System; Overview - Charge Air System .
- Fill the transmission fluid (refer to ⇒ "9.4 Transmission Fluid, Draining and Filling", page 111) and check the transmission fluid level (refer to ⇒ "9.3 Transmission Fluid Level, Checking", page 108).



#### **Tightening Specifications**

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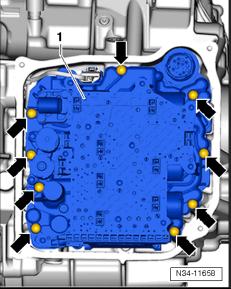
- ◆ Refer to ⇒ "1.1 Overview Mechatronics" apage 24 AUDI AG. AUDI AG does not guarantee or accept any liability of information in this document. Copyright by AUDI AG.
- Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Overview - Front Wheel Housing Liner.
- Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview - Noise Insulation .

#### 1.3 Mechatronic, Removing and Installing

### Removing

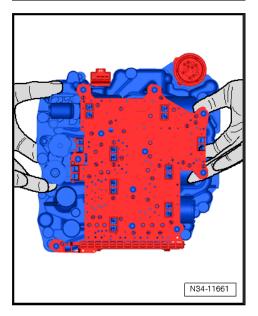
- Pay attention to Refer to <u>⇒ "4 Repair Information"</u>, page 6.
- Pay attention to Refer to ⇒ "4.2 Guidelines for Clean Working Conditions", page 6.
- Remove the transmission fluid pan. Refer to ⇒ "1.2 Transmission Fluid Pan, Removing and Installing", page 25
- Loosen and remove the screws -arrows- in a diagonal sequence.
- Carefully remove the mechatronic -1-.

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### Holding and Carrying the Mechatronic

- Remove the Dual-Clutch Transmission Mechatronic - J743- .





#### Store the Mechatronic properly

Store the Mechatronic so that the sensors -arrows- face upward.

### Installing

Install in reverse order of removal. At the same time note the following:

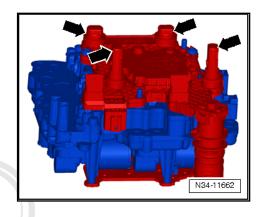
- Replace the bolts for the Dual-Clutch Transmission Mechatronic - J743- .
- If the Dual-Clutch Transmission Mechatronic J743- is being replaced, the O-ring is included in the replacement part delivery package.
- Carefully place the Mechatronic -1- in the transmission.
- Tighten the bolts -arrows- for the Dual-Clutch Transmission Mechatronic - J743- . Refer to ⇒ Fig. "" Dual-Clutch Transmission Mechatronic -J743- - Tightening specification and sequence", page 25
- Install the transmission fluid pan. Refer to ⇒ "1.2 Transmission Fluid Pan, Removing and Installing", page 25.
- Fill the transmission fluid (refer to \$\infty\$ 19.4 Transmission Fluid in part Draining and Filling page 1.1.1.1 and check the transmission tee or a fluid level (refer to be 9.3 Transmission Fluid Level, Check-Copyright ing", page 108).

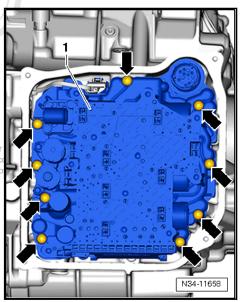
#### Basic Setting, Performing:

- Connect the ⇒ Vehicle diagnostic tester and select Indi-
- Dual clutch transmission 0GC
- 01 OBD-capable systems
- 02 Transmission electronics
- ♦ 02 Transmission electronic functions
- ♦ 02 Mechatronic, replacing
- Follow the instructions on the display.

#### **Tightening Specifications**

◆ Refer to ⇒ "1.1 Overview - Mechatronic", page 24





#### 2 Shift Mechanism

- ⇒ "2.1 Overview Selector Lever Handle", page 30
- ⇒ "2.2 Overview Shift Mechanism", page 34
- ⇒ "2.3 Emergency Release from P", page 36
- <u>"2.4 Selector Lever Handle, Removing and Installing", page</u>
- <u>.5 Button in Handle, Moving into Installation Position", page</u>
- ⇒ "2.6 Shift Mechanism, Removing and Installing", page 43
- ⇒ "2.7 Shift Mechanism, Checking", page 45
- 2.8 Selector Lever Cable, Checking and Adjusting", page
- ⇒ "2.9 Parking Lock Shaft Seal, Replacing", page 49

#### 2.1 Overview - Selector Lever Handle

- ⇒ "2.1.1 Overview Selector Lever Handle, A3 and Q2", page 30
- ⇒ "2.1.2 Overview Selector Lever Handle, A1", page 31
- ⇒ "2.1.3 Overview Selector Lever Handle, Q3", page 32
- ⇒ "2.1.4 Overview Selector Lever Handle, TT", page 33

#### 2.1.1 Overview - Selector Lever Handle, A3 and Q2

The overview shows a LHD vehicle as an example. For RHD vehicles the layout is a mirror image.



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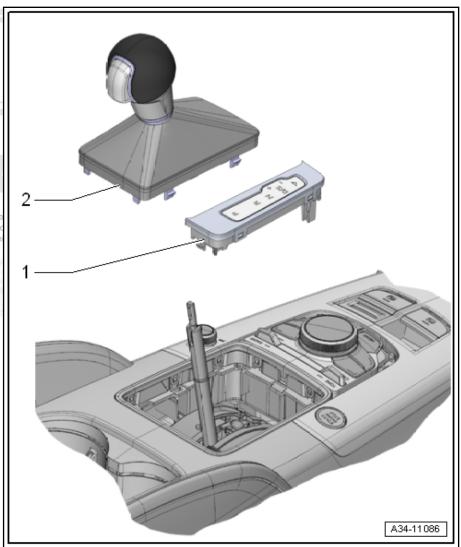


#### 1 - Selector Lever Transmission Range Position Display Unit - Y26-

□ Removing and Installing. Refer to ⇒ Electrical Equipment; Rep. Gr. 96; Lamps; Selector Lever Transmission Range Position Display Unit - Y26- , Removing and Installing .

#### 2 - Selector Lever Handle

- With selector lever boot
- Protected by Chemoving and Instal-Protected by copynylly Copyngliby of billing in Refer to Bar A2.4 Sec with respected ector of evers Handle jon in t Removing and Installing", page 38
  - ☐ Locking Button on Selector Lever Handle, Bringing into Installation Position. Refer to ⇒ 2.5 Button in Handle, Moving into Installation Position", page 41



#### 2.1.2 Overview - Selector Lever Handle, A1

The overview shows a LHD vehicle as an example. For RHD vehicles the layout is a mirror image.

#### 1 - Selector Lever Handle

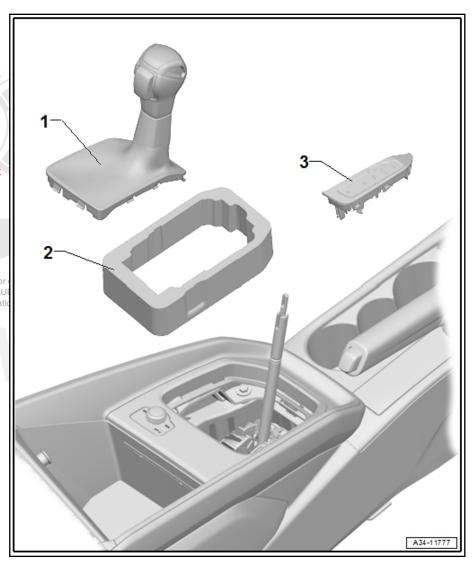
- With selector lever boot
- Removing and Installing. Refer to ⇒ "2.4 Selector Lever Handle, Removing and Installing", page 38
- ☐ Locking Button on Selector Lever Handle, Bringing into Installation Position. Refer to ⇒ 2.5 Button in Handle, Moving into Installation Position", page 41

### 2 - Insulation

- □ For selector housing
- Not for all vehicles

#### 3 - Selector Lever Transmis- AL sion Range Position Display Unit - Y26-

Removing and Installing. Refer to ⇒ Electrical Equipment; Rep. Gr. 96; Lamps; Selector Lever Transmission Range Position Display Unit - Y26-, Removing and Installing.



#### 2.1.3 Overview - Selector Lever Handle, Q3

The overview shows a LHD vehicle as an example. For RHD vehicles the layout is a mirror image.

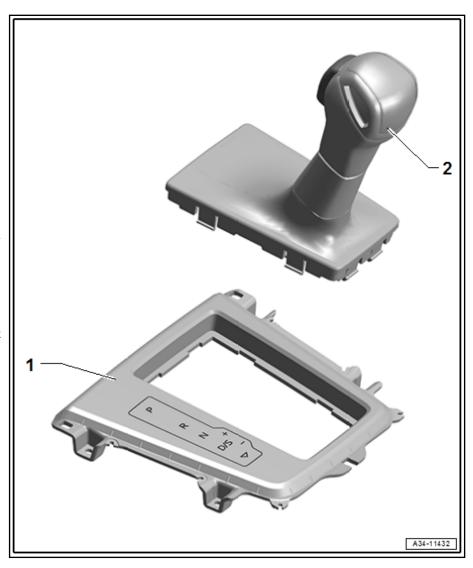


#### 1 - Selector Lever Transmission Range Position Display Unit - Y26-

□ Removing and Installing. Refer to ⇒ Electrical Equipment; Rep. Gr. 96; Lamps; Selector Lever Transmission Range Position Display Unit - Y26- , Removing and Installing.

#### 2 - Selector Lever Handle

- With selector lever boot
- Removing and Installing. Refer to ⇒ "2.4 Selector Lever Handle, Removing and Installing", page 38
- ☐ Locking Button on Selector Lever Handle, Bringing into Installation Position. Refer to ≥ 2.5 Button in Handle, Moving into Installation Position", page 41



#### 2.1.4 Overview - Selector Lever Handle, TT

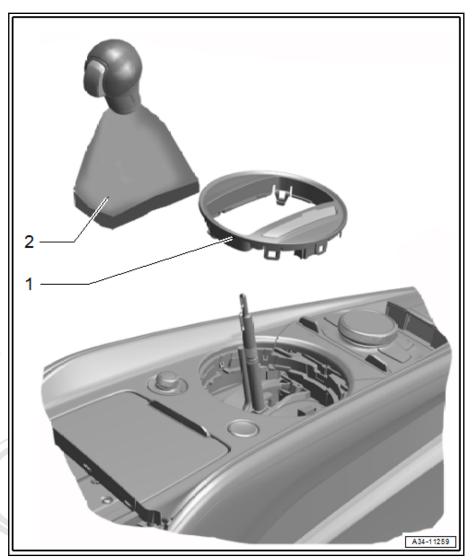
The overview shows a LHD vehicle as an example. For RHD vehicles the layout is a mirror image.

#### 1 - Selector Lever Transmission Range Position Display Unit - Y26-

- ☐ Unit with trim
- □ Removing and Installing. Refer to ⇒ Electrical Equipment; Rep. Gr. 96; Lamps; Selector Lever Transmission Range Position Display Unit - Y26-, Removing and Installing.

#### 2 - Selector Lever Handle

- With selector lever boot
- Removing and Installing. Refer to <del>⇒ "2.4 Se-</del> lector Lever Handle, Removing and Installing", page 38
- ☐ Locking Button on Selector Lever Handle, Bringing into Installation Position. Refer to ≥ 2.5 Button in Handle, Moving into Installation Position", page 41



#### 2.2 Overview - Shift Mechanism

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#### 1 - Shift Mechanism

- With the following integrated components:
- Selector Lever E313-
- Selector Lever Sensor System Control Module -
- Selector Lever Park Position Lock Switch - F319-
- Shift Lock Solenoid -N110-
- Selector Lever Cable
  - The components cannot be replaced separately if faulty.
  - ☐ Check using Guided Fault Finding on the 
    ⇒ Vehicle diagnostic tester.
  - Do not lubricate the selector lever cable
  - Emergency release from P. Refer to ⇒ 2.3 Emergency Release from P", page
  - ☐ Shift Mechanism, Removing and Installing. Refer to :: 2.6 Shift right. ( and Installing" epage the co <u>43</u> .

## 2 - Nut

- Quantity: 4
- ☐ For selector mechanism to body
- □ 8 Nm

#### 3 - Bolt

□ 20 Nm

#### 4 - Clamps

- Replace after removing
- ☐ Be careful not to damage the selector lever cable when removing
- ☐ Installation position: the offset side of the clamp points to the selector lever

#### 5 - Cable Bracket

□ For the selector lever cable

#### 6 - Grommet

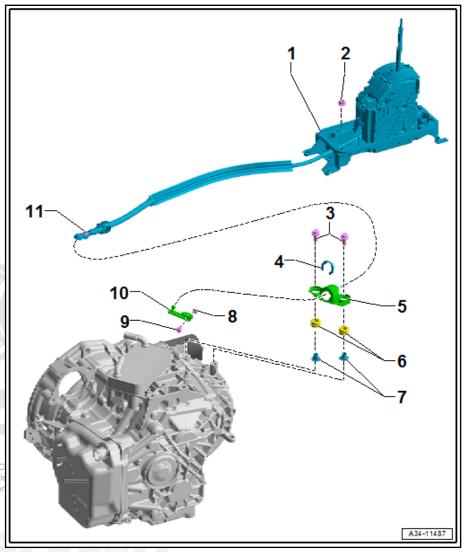
- Clipped in the cable bracket
- ☐ For the cable mounting bracket to transmission

☐ Installation position: the larger diameter points to the transmission

#### 8 - Nut

#### 9 - Bolt

Replace after removing



- 10 Shift Lever

☐ 10 Nm +90°

- 11 Bolt
  - □ Selector lever cable adjusting bolt
  - □ 12 Nm

### 2.3 Emergency Release from P

⇒ "2.3.1 Emergency Release from P, A1, A3, Q2, Q3", page 36

⇒ "2.3.2 Emergency Release from P, TT", page 37

## 2.3.1 Emergency Release from P, A1, A3, Q2, Q3

- The selector lever will not shift out of "P" if the battery is disconnected or drained. The vehicle cannot be moved or towed.
- The Shift Lock Solenoid N110- will release the lock when the emergency release is activated.

#### Special tools and workshop equipment required

♦ Wedge Set - T10383-

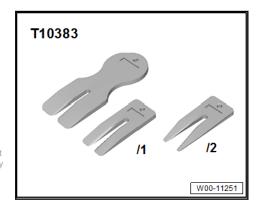


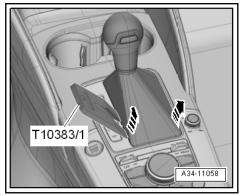
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# d by copyright. Copying for private or commercial purposes, in p

#### **Procedure**

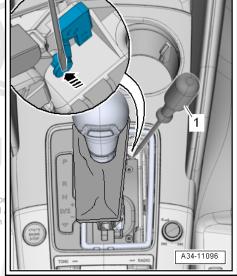
- Pull the parking brake button to activate the electro-mechanical parking brake.
- Unclip the selector lever boot on both sides by hand or with the Wedge Set - T10383/1- -arrows- and fold it upward.





#### A3, Q2:

- For example, release the Shift Lock Solenoid in the -direction of the arrow- using a screwdriver -1- and hold it in this position.
- The solenoid releases the selector lever.



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#### A1, Q3:

- With a screwdriver push the plastic part -1- from the top and hold it in this position.
- The solenoid releases the selector lever.

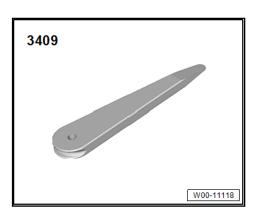
#### All Vehicles:

- When the solenoid is released, press the button in the selector lever handle and move the selector lever out of "P".
- If the selector lever is shifted back into "P", the Shift Lock Solenoid - N110- will mechanically lock the selector lever in the "P" position again. The solenoid must be released again.

#### 2.3.2 Emergency Release from P, TT

#### Special tools and workshop equipment required

◆ Trim Removal Wedge - 3409-



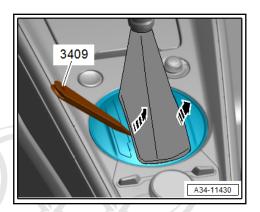
A34-11776

#### **Procedure**

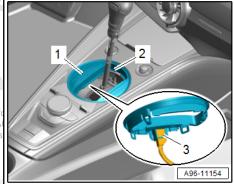
- Move the selector lever into "D/S" position.
- Switch the ignition off.
- Pull the parking brake button to activate the electro-mechanical parking brake.



 Unclip the selector lever boot on both sides using the Trim Removal Wedge - 3409- -arrows- and fold it upward.

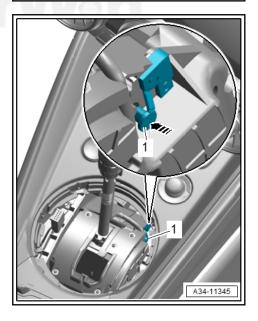


- Release the catches -2- and remove the selector lever transmission range position display unit -1- upward.
- Disconnect the connector -3-.



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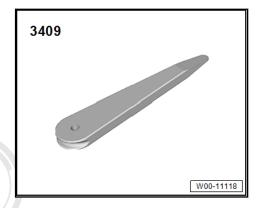
- For example, release the Shift Lock Solenoid -item 1- in the -direction of the arrow- using a screwdriver and hold it in this position.
- · The solenoid releases the selector lever.
- When the solenoid is released, press the button in the selector lever handle and move the selector lever out of "P".
- If the selector lever is shifted back into "P", the shift lock solenoid will mechanically lock the selector lever in the "P" position again. The solenoid must be released again.



## 2.4 Selector Lever Handle, Removing and Installing

Special tools and workshop equipment required

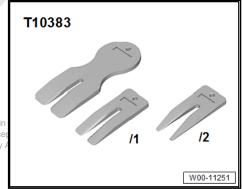
Trim Removal Wedge - 3409-



♦ Wedge Set - T10383-



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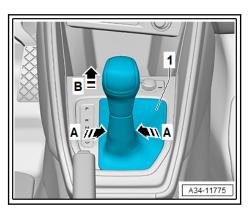


#### Removing

- Pull the parking brake button to activate the electro-mechanical parking brake.
- Move the selector lever into "D/S" position.
- Switch the ignition off.

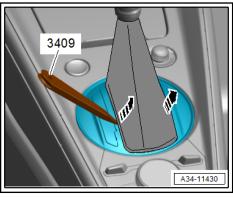
#### Audi A1:

Using both hands, reach into the shift lever boot on the right and left sides -arrows- and unclip the shift cover -1- by pulling it upward -A arrows-.



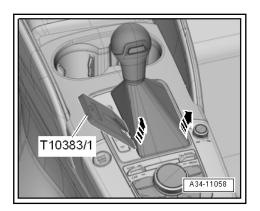
#### Audi TT:

Unclip the selector lever boot on both sides using the Trim Removal Wedge - 3409- -arrows- and fold it upward.



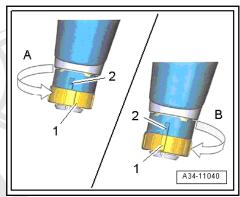
#### Audi A3, Q2, Q3:

Carefully pry out the selector lever boot with the Wedge Set - T10383/1- on both sides -arrows- and then fold it upward.



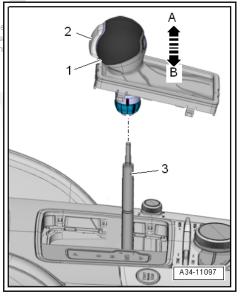
#### All Vehicles:

- Turn the locking ring all the way in the -direction of arrow A-.
- The tab -1- on the locking ring is offset to the tab -2- on the selector lever handle.



Remove the selector lever handle -1- upward with the selector lever boot -arrow A- without touching the locking button -2-. permitted unless authorised by AUDI AG. AUDI AG does not gu

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#### Installing

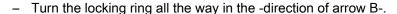
Install in the reverse order of removal while noting the following:

The locking button -2- points in the direction of travel.

#### NOTICE **(D)**

Risk of damaging the selector mechanism by incorrectly installing the selector lever.

- Do not press the locking button on the selector lever han-
- Press the selector lever handle -1- completely onto the selector lever -arrow B- without touching the locking button -2-.
- The selector lever handle must engage into the ring groove on the selector lever.



- It must be possible to turn the locking ring. If necessary, press the selector lever handle again.
- The tab -1- on the locking ring is under the tab -2- on the selector lever handle.
- The selector lever handle is only properly locked if the locking ring was turned. Only then may the locking button on the handle be pressed.
- The locking button may have an increased resistance to pressure the first time it is pushed after installing the selector lever handle.
- Press the locking button on the selector lever handle.
- Fold the selector lever boot downward and clip it in.
- Check the selector mechanism. Refer to ⇒ "2.4 Selector Lever Handle, Removing and Installing", page 38.

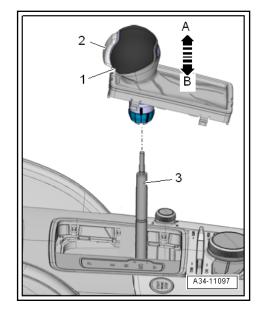
#### 2.5 Button in Handle, Moving into Installation Position

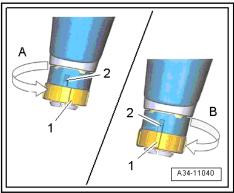
Special tools and workshop equipment required

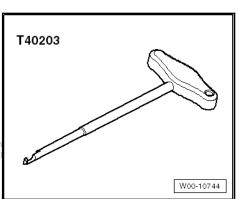
Locking Button Removal Tool - T40203-



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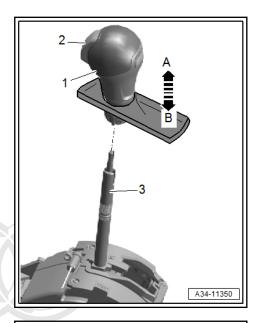




#### **Procedure**

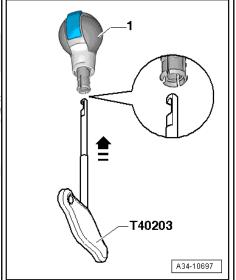
The locking button -2- sticks out in its installation position on the selector lever handle.

If the locking button was pressed in, it must be brought back to its installation position so that the selector lever handle can be installed.

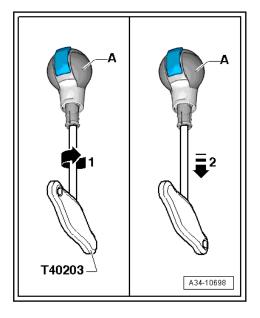


- Carefully guide the Locking Button Removal Tool T40203all the way into the selector lever handle -1- -arrow-. (Shown without the selector lever boot).
- The opening on the Locking Button Removal Tool T40203faces the locking button and the hook to the left.

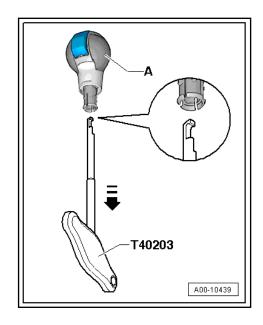
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- Hold the selector lever handle -A- firmly and turn the Locking Button Removal Tool - T40203- 180° in the -direction of arrow 1-.
- Hold the selector lever handle firmly and carefully remove the Locking Button Removal Tool - T40203- -arrow 2-.



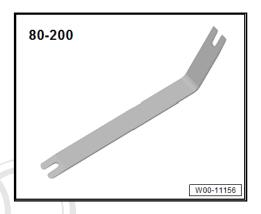
- When removing the Locking Button Removal Tool -T40203-, the locking button on the selector lever handle -Ais pushed out and locked.
- Do not touch the locking button anymore before installing the selector lever handle so that the locking button does not fall



#### 2.6 Shift Mechanism, Removing and Installing

Special tools and workshop equipment required

Pry Lever - 80-200-



#### Removing

Remove the selector lever handle with the selector lever boot. Refer to ⇒ "2.4 Selector Lever Handle, Removing and Installing", page 38.

#### A3, Q2, TT:

- Remove the Selector Lever Transmission Range Position Display Unit - Y26- . Refer to ⇒ Electrical Equipment; Rep. Gr. 96; Lamps; Selector Lever Transmission Range Position Display Unit - Y26<sub>Prot</sub>Removing and Installing to recommercial purposes, in part or in whole, is not
- Remove the center consoler insert. Refer to say a production of Body in the first occurrent consoler insert. Refer to say a Body in the first occurrent. Copyright by AUDI AG. Rep. Gr. 68; Center Console; Center Console Insert, Removing and Installing .

#### A1, Q3:

Remove the center console. Refer to ⇒ Body Interior; Rep. Gr. 68; Center Console; Center Console, Removing and Installing.

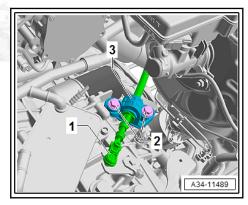
#### All Vehicles:

- Disconnect the connector -1- from the selector mechanism function unit to the vehicle wiring harness.
- Vehicles with engine compartment battery: remove the battery and the battery tray. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery Tray, Removing and Installing .

#### **AWD Vehicles:**

 Remove the driveshaft. Refer to ⇒ Rear Final Drive; Rep. Gr. 39; Driveshaft; Driveshaft, Removing and Installing.

- A3 and TT: Remove the center tunnel heat shield. Refer to ⇒ Body Exterior; Rep. Gr. 66; Trim Strips / Trim / Extensions / Trim Panels; Floor Heat Shield, Removing and Installing .
- A1, Q2 and Q3: Remove the heat shield for the tunnel. Refer to  $\Rightarrow$  Body Exterior; Rep. Gr. political extensions by Components AG does not guarantee or accept any liability Location Overview - Heat Shields respect to the correctness of information in this document. Copyright by AUDI AG.
- Remove the ball socket -1- on the selector lever cable from the selector shaft lever using the Pry Lever - 80-200-.
- Remove the bolts -2- from the cable mounting bracket.



A37-11026

- Remove the nuts -arrows- in the vehicle interior.
- A second technician is required under the vehicle to remove the selector mechanism function unit.
- Remove the selector lever function unit from below with the selector lever cable.

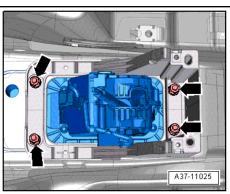


Risk of damaging the operating cable by deforming it.

Never bend the operating cable too sharply or kink it.

### Installing

Install in the reverse order of removal while noting the following:



- Position the selector lever cable with the cable bracket and tighten with the bolts -2-.
- Carefully press the ball head -1- of the selector lever cable on the selector lever.
- If removed, install the battery and the battery tray. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery Tray, Removing and Installing.
- Install the center console insert. Refer to ⇒ Body Interior; Rep. Gr. 68; Center Console; Center Console Insert, Removing and Installing .
- Install the selector lever handle with the selector lever boot. Refer to ⇒ "2.4 Selector Lever Handle, Removing and Instal-
- Adjust the selector lever cable. Refer to ⇒ "2.8 Selector Lever Cable, Checking and Adjusting", page 48
- Check the selector mechanism and ignition switch key lock. Refer to ⇒ "2.7 Shift Mechanism, Checking", page 45.

#### **Tightening Specifications**

- Refer to ⇒ "2.2 Overview Shift Mechanism", page 34
- Refer to ⇒ Body Exterior; Rep. Gr. 66; Trim Strips / Trim / Extensions / Trim Panels; Overview - Heat Shield .
- Battery tray and battery. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Overview - Battery.

#### 2.7 Shift Mechanism, Checking

#### Overview:

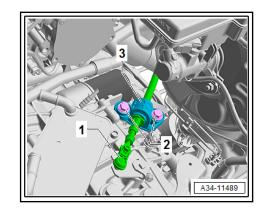
- ◆ 1. Selector Mechanism Function Test. Refer to ⇒ page 45
- 2. Checking the ignition key lock. Refer to ⇒ page 46.
- Checking the closing locks. Refer to ⇒ page 47.
- 4. Checking the selector lever handle locking button. Refer to  $\Rightarrow$  page 47.
- 5. Checking the connectors on the selector mechanism. Re-Copying for private or commercial purposes, in part or in whole, is not fer to  $\Rightarrow$  page 48. permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability

#### 1. Selector Mechanism Functionality Test

- Never operate the starter when the selector lever is in "D", "S", "R" or the "tiptronic gate".
- If the selector lever position "N" is selected at speeds greater than 5 km/h (3.1 mph), the shift lock solenoid does not engage and locks the selector lever. The selector lever can be shifted into another position.
- If the selector lever position "N" is selected at speeds below 2 km/h (1.2 mph) (almost stopped), the shift lock solenoid may only engage after approximately one second. The selector lever can only be moved out of "N" when the brake pedal is pressed.

#### Selector lever in "P" position:

- Pull the parking brake button to activate the electro-mechanical parking brake.
- Switch the ignition off.
- The selector lever is locked and cannot be shifted out of the "P" position when the locking button on the selector lever handle is pressed.



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- Switch the ignition on.
- Do not press the brake pedal.
- The selector lever is locked and cannot be shifted out of the "P" position when the locking button on the selector lever handle is pressed. The Shift Lock Solenoid - N110- locks the selector lever.
- Press the brake pedal and hold.
- The Shift Lock Solenoid N110- unlocks the selector lever. It
  is possible to select a gear. Press the button in the selector
  lever handle and slowly move the selector lever from "P"
  and through "R, N, D, S". While doing this, make sure the
  transmission range display in the instrument cluster and in
  the center console matches the selector lever position.

Selector lever in "N" and ignition switched on:

- Do not press the brake pedal.
- After a brief wait time: the selector lever is locked and cannot be moved out of "N" even though the locking button on the selector lever handle is pressed. The Shift Lock Solenoid N110- locks the selector lever.
- Press the brake pedal.
- The Shift Lock Solenoid N110- unlocks the selector lever. It is possible to shift into "D" or "R" position.

Selector lever in "D" position and the ignition is switched on:

- Guide the selector lever into the "tiptronic gate".
- The "D" in the Selector Lever Transmission Range Position
   Display Unit Y26- must turn off and the "+" and "-" must
   turn on steeted by copyright. Copying for private or commercial purposes, in part or in whole, is not
- The transmission range display in the instrument cluster by AUDI AG.
  must switch from "D" to "M1" when moving the selector lever
  in the "tiptronic gate".

Selector lever in "D" position and the ignition is switched on:

- Press the locking button on the selector lever handle.
- It is possible to shift into "S" position.

If the specified values are not obtained:

- Perform Guided Fault Finding using the ⇒ Vehicle diagnostic tester.
- Adjust the selector lever cable. Refer to ⇒ "2.8 Selector Lever Cable, Checking and Adjusting", page 48.
- Check the locking button on the selector lever handle. Refer to ⇒ page 47.

## 2. Ignition Switch Key Lock, Checking on Vehicles with Ignition Kev

- Pull the parking brake button to activate the electro-mechanical parking brake.
- Do not press the brake pedal.
- Switch the ignition on.
- Press the brake pedal and hold.
- It must be possible to move the selector lever out of "P" without "getting stuck" when the locking button in the selector lever handle is pressed.



- Switch the ignition off.
- It should not be possible to remove the ignition key when the selector lever is in any other position than "P".
- Move the selector lever into "P" position.
- Remove the ignition key.
- The ignition key must only be able to be removed in selector lever position "P".
- The selector lever does not move out of "P" even though both the locking button and the brake pedal are pressed.

If the ignition switch key lock does not work as described hercial purposes, in part or in whole, is not does not guarantee or accept any liability

Use the ⇒ Vehicle diagnostic tester in เดลรง de do เกลเลา ๒ ประวัตถุ เกลเลา เกลเลา No. AG. ing for Fault Finding.

#### 3. Check the closing locks - vehicles with keyless stop and start systems

- Switch the ignition on.
- Do not move the selector lever into "P" but rather, for example, into "N".
- Switch the ignition off.
- A warning message must be displayed in the instrument cluster.
- The vehicle cannot be locked.
- Move the selector lever into "P" position.
- The vehicle can be locked.

If the specified values are not obtained:

- Use the ⇒ Vehicle diagnostic tester in Guided Fault Finding for Fault Finding.
- Adjust the selector lever cable. Refer to ⇒ "2.8 Selector Lever Cable, Checking and Adjusting", page 48
- Check the locking button on the selector lever handle. Refer to  $\Rightarrow$  page 47.

#### 4. Selector Lever Handle Locking Button, Checking

Locking Button, Checking Ease of Movement:

- It must be possible to press the locking button without using great force.
- After releasing it, the locking button must come all the way back out by itself.
- If the specified values are not reached, check if the selector lever handle was installed correctly. Refer to ⇒ "2.4 Selector Lever Handle, Removing and Installing", page 38.
- Make sure the selector lever is not bent.

#### Function test:

The ignition is switched on.

The locking button on the selector lever handle must be pressed for the following gear changes. If the locking button is not pressed, the selector lever cannot be shifted into the specified position.

"P" into "R" and also press the brake pedal

- "N" into "R"; stationary, also press the brake pedal after a longer wait time
- "R" into "P"

If the specified values are not obtained:

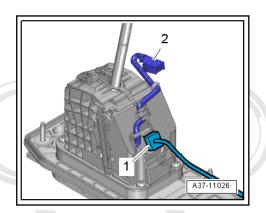
- Check that the selector lever handle was installed correctly. Refer to ⇒ "2.4 Selector Lever Handle, Removing and Installing", page 38.
- Check the connectors on the selector mechanism.
- Check the Shift Lock Solenoid N110- using the ⇒ Vehicle diagnostic tester in Guided Fault Finding
- Adjust the selector lever cable. Refer to ⇒ "2.8 Selector Lever Cable, Checking and Adjusting", page 48

#### 5. Connectors on Selector Mechanism, Checking

Before repairing or inspecting the connectors, check all control modules in the vehicle for DTC memory entries using the ⇒ Vehicle diagnostic tester in Guided Fault Finding. If required, correct any faults.

Check all the control modules for faults stored the DTC memories and erase them if necessary before checking the connectors using the ⇒ Vehicle diagnostic tester.

- Check the connectors. Refer to ⇒ Wiring diagrams, Troubleshooting & Component locations.
- 1 -Connector for connecting lines from the selector mechanism function unit to the transmission (with CAN bus wires) and to the Shift Lock Solenoid - N110- and Selector Lever Park Position Lock Switch - E319- .
- Selector Lever Transmission Range Position Display Unit - Y26- Connector



#### 2.8 Selector Lever Cable, Checking and Adjusting

#### Selector Lever Cable, Adjusting

- rotected by copyright. Copying for private or commercial purposes, in part or in whole, is not Selector mechanism and selector lever cable move easily mitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability when shifting. with respect to the correctness of information in this document. Copyright by AUDI AG.
- The selector lever cable rubber grommet is not damaged.

The selector lever cable must be adjusted if:

- The selector lever cable was removed from the transmission.
- The engine and (or) transmission were removed and instal-
- The selector lever cable was removed and installed with the selector mechanism.
- The engine/transmission position was changed, for example, were installed without tension.
- Remove the air filter housing. Refer to ⇒ Engine Mechanical; Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing or ⇒ Engine Mechanical; Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.

- Move the selector lever into "P" position.
- Loosen the adjusting bolt -arrow- for the selector lever cable.
- Set the selector lever on the transmission to "P". Push the selector lever all the way to the rear opposite the direction of travel to check it.
- Turn both front wheels in one direction, for example by moving the vehicle forward until the detent lever in the transmission engages in the parking lock gear.
- The parking lock is engaged only when it is not possible to turn both wheels in the same direction at the same time.
- Carefully move the selector lever slightly forward and backward without shifting to a different selector lever position.
- This loosens the selector lever cable.
- Tighten the adjusting bolt -arrow-. The position of the selector lever cable must not change while doing this.

#### Selector Lever Cable, Checking Adjustment

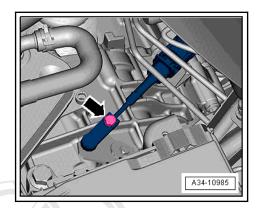
- Press the button and move the selector lever to the rear approximately 5 mm out of "P" and hold it there. Do not move it into "R".
- Release the selector lever.
- The selector lever must jump backeinto "B" by hitselfing for private or commercial purposes, in part or in whole, is not
- Move the selector lever into "N". with respect to the correctness of information in this document. Copyright by AUDI AG.
- Press the button and move the selector lever to the rear approximately 5 mm out of "N" and hold it there. Do not move it into "D".
- Release the selector lever.
- The selector lever must jump back into "N" by itself.
- Press the button and move the selector lever forward approximately 5 mm out of "N" and hold it there. Do not move it into "R".
- Release the selector lever.
- The selector lever must jump back into "N" by itself.
- If the selector lever does not react as described, repeat the adjustment.
- Check the selector mechanism. Refer to ⇒ "2.7 Shift Mechanism, Checking", page 45.
- Install the air filter housing. Refer to ⇒ Engine Mechanical; Rep. Gr. 23 ; Air Filter; Air Filter Housing, Removing and Installing or ⇒ Engine Mechanical; Rep. Gr. 24 ; Air Filter; Air Filter Housing, Removing and Installing.

#### **Tightening Specifications**

Refer to ⇒ "2.2 Overview - Shift Mechanism", page 34

#### 2.9 Parking Lock Shaft Seal, Replacing

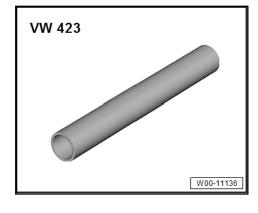
Special tools and workshop equipment required

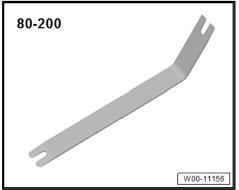




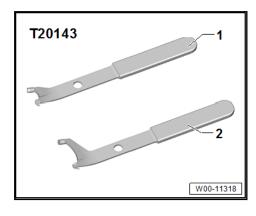
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♦ Pry Lever - 80-200-





◆ Puller - Crankshaft/Power Steering Seal - T20143-



#### **Procedure**

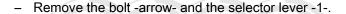
- The transmission is installed.
- Replace bolts that were tightened with an additional turn after removing them.
- Vehicles with engine compartment battery: remove the battery and the battery tray. Refer to ⇒ Electrical Equipment;
   Rep. Gr. 27; Battery; Battery Tray, Removing and Installing.

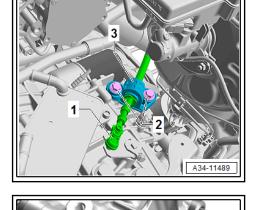
Remove the ball socket -1- on the selector lever cable from the selector shaft lever using the Pry Lever - 80-200- .

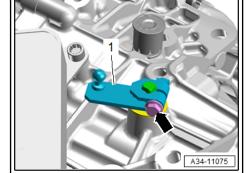


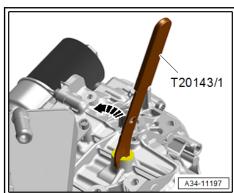
Risk of damaging the operating cable by deforming it.

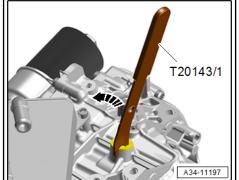
- Never bend the operating cable too sharply or kink it.
- Remove the bolts -2- and tie up the cable bracket -3- together with the selector lever cable.









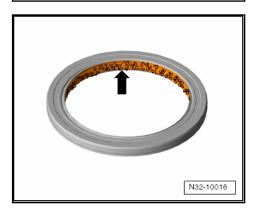




Pry out the seal using the Puller - Crankshaft/Power Steerwing Seal or th 12014361 of affown in this document. Copyright by AUDI AG.

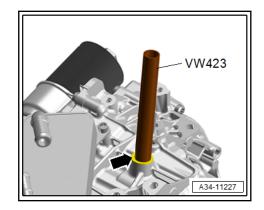


- Coat the outer edge and sealing lips on the new seal with transmission fluid.
- Fill the space between the sealing/dust lip -arrow- halfway with sealing grease. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct sealing grease.



Drive in the seal using the Press Piece - Shift Rod/Alternator - VW423- all the way at the same time do not tilt the gasket.

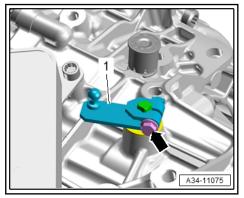
The closed side of the seal -arrow- faces outward.



- Place the selector lever -1- on the parking lock shaft and tighten the bolt -arrow-.
- Press the selector lever cable onto the selector lever and adjust the selector lever cable. Refer to  $\Rightarrow$  "2.8 Selector Lever Cable, Checking and Adjusting", page 48
- If removed, install the battery and the battery tray. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery Tray, Removing and Installing.

#### **Tightening Specifications**

Refer to ⇒ "2.2 Overview - Shift Mechanism", page 34





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#### 3 Transmission, Removing and Installing

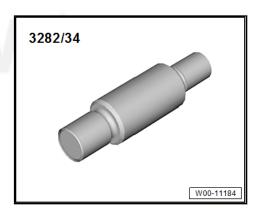
- ⇒ "3.1 Transmission, Removing", page 53
- ⇒ "3.2 Transmission, Installing", page 77
- ⇒ "3.3 Transmission Tightening Specifications", page 81
- 3.1 Transmission, Removing
- ⇒ "3.1.1 Transmission, Removing, Vehicles with 1.5L TFSI Engine", page 53
- ⇒ "3.1.2 Transmission, Removing, Vehicles with 2.0L TFSI Engine", page 61
- ⇒ "3.1.3 Transmission, Removing, Vehicles with TDI Engine", page 71
- Transmission, Removing, Vehicles with 3.1.1 1.5L TFSI Engine

◆ Transmission Support - 3282-



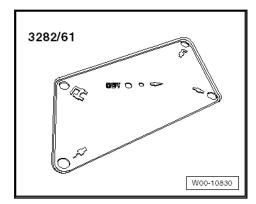
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Transmission Support - Bolt - 3282/34-



Transmission Support - Mounting Plate 61 - 3282/61-





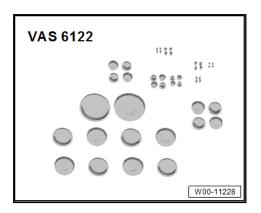
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Hose Clamps Lullps Ton 25 mm AU 3094 UDI AG does not guarantee or accept any lia with respect to the correctness of information in this document. Copyright by AUDI AG

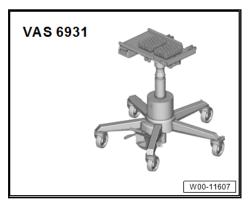




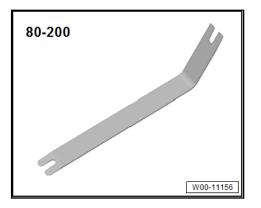
◆ Engine Bung Set - VAS 6122-



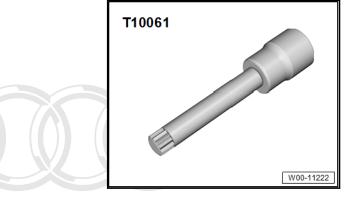
◆ Engine and Gearbox Jack - VAS 6931-



Pry Lever - 80 - 200-



♦ Socket - Xzn 14 - T10061-



♦ Insert Tool - 18mm - T10179-





#### **Procedure**

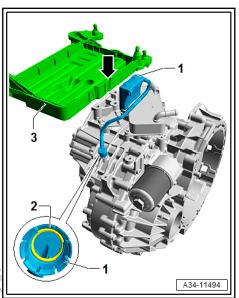
- Pay attention to Refer to ⇒ "4 Repair Information", page 6.
- Reinstall cable ties that were loosened or cut off during removal at the same locations during installation.
- Move the selector lever into "P" position.
- Position the front wheels so they are in the straight-ahead position.
- Switch the ignition off.
- Remove the engine cover. Refer to ⇒ Engine Mechanical; Rep. Gr. 10; Engine Cover; Engine Cover, Removing and Installing.
- Remove the air filter housing. Refer to ⇒ Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.

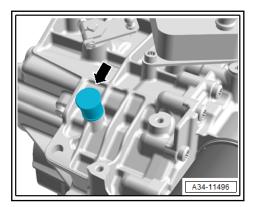
If equipped, remove the bleeder -1- with the bleeder hose from the locking mechanism -arrow- of the battery tray -3-.



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- If the bleeder hose is removed from the transmission bleed pipe the bleed pipe must be sealed using a closure cap
- The closure cap should stop contamination from entering the transmission.
- Vehicles with engine compartment battery: remove the battery and the battery tray. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery Tray, Removing and Installing .

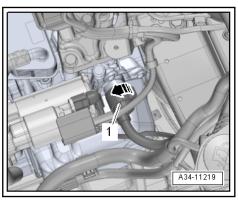


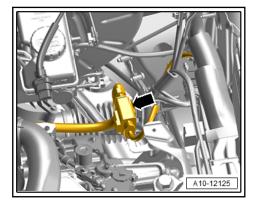




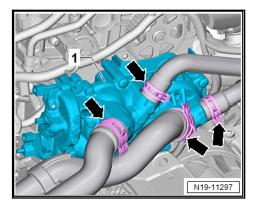
Risk of destroying due to electrostatic charge.

- Do not touch the connector terminals.
- Touch a grounded object (for example the hoist) and discharge any static electricity.
- Turn the twist lock counter-clockwise in the -direction of the arrow- and disconnect the connector -1- and remove.
- Disconnect the connector -arrow- for the Transmission Fluid Auxiliary Hydraulic Pump 1 - V475- .
- Remove the ground wire from the lower starter bolt.
- Remove the starter. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Starter; Starter, Removing and Installing.
- Drain the coolant. Refer to ⇒ Engine Mechanical; Rep. Gr. 19; Cooling System/Coolant, Coolant, Draining and Filling .

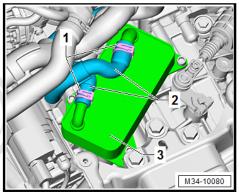




Loosen the hose clamps for the coolant hoses -upper left and lower left arrow- and remove the coolant hoses from the coolant pump -1-.



- Place a cloth on the transmission fluid cooler and transmission to absorb escaping coolant.
- Loosen the hose clamps for coolant hoses -1- and remove the coolant hoses -2- from the transmission fluid cooler -3-.
- Seal the open lines and connections with clean plugs from the Engine Bung Set - VAS 6122- .
- Move the coolant hoses to the side and tie them up.

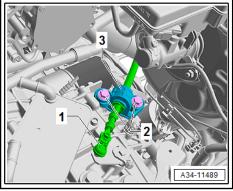


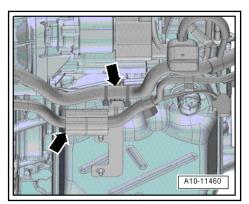
Remove the ball socket -1- on the selector lever cable from the selector shaft lever using the Pry Lever - 80-200- .

## NOTICE

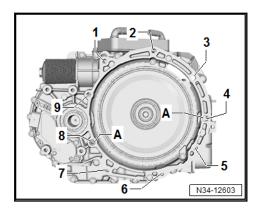
Risk of damaging the operating capite by deforming the purposes, in part or accommendation of damaging the operating capite by deforming the not guarantee or accommendations.

- Never bend the operating cable too sharply or kink it. Ment. Copyright b
- Remove the bolts -2- and tie up the cable bracket -3- together with the selector lever cable.
- Free up the wiring harnesses on front of transmission -arrows-.

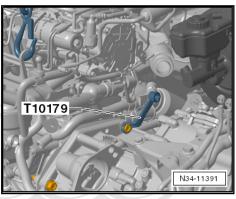




Remove the bolts -1, 2 and 3- from the transmission/engine connection.



The bolts -1 and 2- (previous illustration) can be removed and installed using the Insert Tool - 18mm - T10179- .



- One bolt is located inside the hole for the starter -arrow-This bolt can be removed and installed with the Socket - Xzn 14 - T10061-.
- Support the engine in the installation position. Refer to ⇒ Engine Mechanical; Rep. Gr. 10; Subframe Mount; Engine, Supporting in Installation Position .
- Remove the subframe without the steering gearste Refer to ht. Copying ⇒ Suspension, Wheels, Steering; Rep. Gr. 40 th Subframe; rised by A Subframe without Steering Gear, Removing and Installing correctness
- Secure the subframe. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Subframe; Subframe, Securing.
- Disconnect the exhaust system at the clamping sleeve -arrow-.

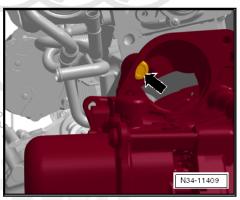


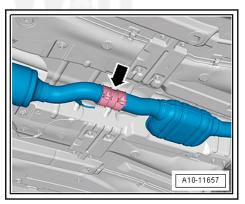
Incorrect handling can damage the coupling.

- Do not bend the coupling more than 10°.
- Do not load the coupling.
- Tie up the front exhaust pipe.

### **AWD Vehicles:**

Remove the driveshaft from the bevel box. Refer to ⇒ Rear Final Drive; Rep. Gr. 39; Driveshaft; Driveshaft, Removing and Installing .

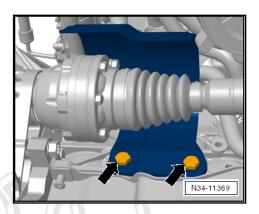


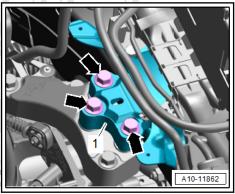


#### All Vehicles:

- Remove the right drive axle heat shield -arrows-.
- Remove the left and right drive axles from the transmission and tie them up. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle, Drive Axle, Removing and Installing .
- Make sure that the drive axle protective coating is not damaged.

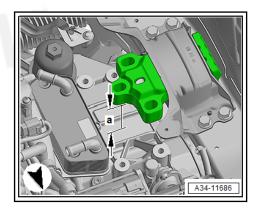






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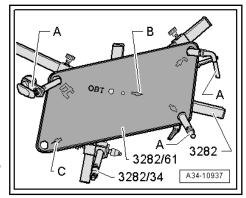
- Lower the engine/transmission assembly using the Engine Support Bridge - Spindle - 10 - 222 A /11- until the dimension -a- is reached between the transmission housing and the transmission mount.
- Dimension -a- = 90 mm.

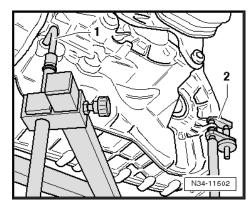


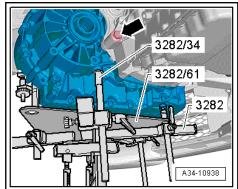
The Transmission Support - 3282- is equipped with the Transmission Support - Mounting Plate 61 - 3282/61- to remove the dual-clutch transmission 0GC.

- The Transmission Support 3282- is inserted in the Engine and Gearbox Jack - V.A.G 1383 A- or Engine and Gearbox Jack - VAS 6931- .
- Align the Transmission Support arms so that they align with the holes in the Adjusting Plate.
- Install the mounting elements -A- on the Adjustment Plate as shown. The Transmission Support Bolt 3282/34 is used as the right rear mounting element. This mounting element is located outside of the Adjusting Plate.
- The mounting element -C- on the Adjusting Plate is not used.
- Position the Engine and Gearbox Jack V.A.G 1383 A- or Engine and Gearbox Jack - VAS 6931- under the vehicle.
- The arrow symbol -B- on the Mounting Plate points in direction of travel.
- Align the Transmission Support 3282- so that it is parallel to the transmission.
- Insert the hook -1- in the dual-clutch transmission mount.
- Secure the safety support -2- in the dual-clutch transmission mount.

- Install the Transmission Support Bolt 3282/34- in the transmission.
- Support the transmission from underneath using the Engine and Gearbox Jack .
- Remove the engine to transmission bolt -arrow-.



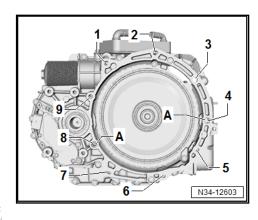


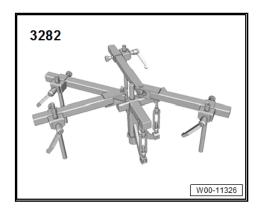


- Then remove the bolts -4 to 9- that connect the transmission to the engine.
- Separate the transmission from the alignment sleeves on the engine.
- Carefully lower the transmission using the Engine-Transmission Jack . Be sure not to pinch any lines while doing so.
- When lowering, change the transmission position using the spindles on the Transmission Support - 3282- .
- If necessary, when installing a new transmission refit the attachments.
- ◆ Selector lever cable bracket
- ate or commercial purposes, in part or in whole, is not Bleeder with bleederd in AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- Cable bracket on the oil pan (transmission cover)

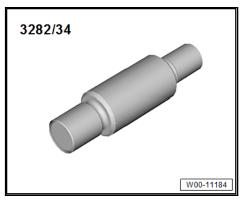
#### 3.1.2 Transmission, Removing, Vehicles with 2.0L TFSI Engine

♦ Transmission Support - 3282-

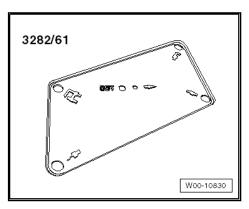




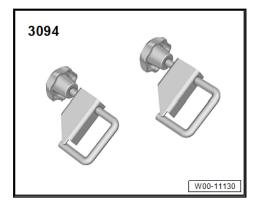
Transmission Support - Bolt - 3282/34-



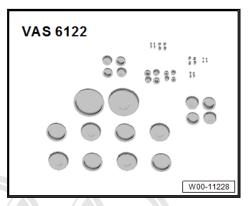
◆ Transmission Support - Mounting Plate 61 - 3282/61-



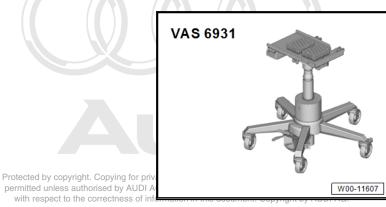
♦ Hose Clamps - Up To 25 mm - 3094-



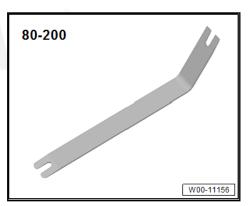
♦ Engine Bung Set - VAS 6122-



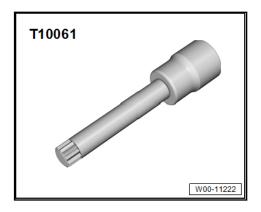
♦ Engine and Gearbox Jack - VAS 6931-



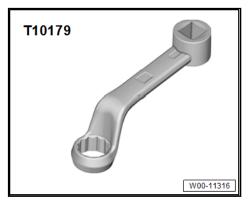
Pry Lever - 80 - 200-



Socket - Xzn 14 - T10061-

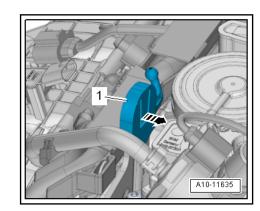


♦ Insert Tool - 18mm - T10179-



#### **Procedure**

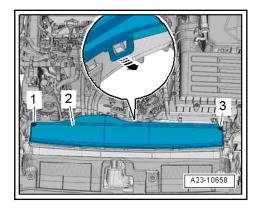
- ◆ Pay attention to Refer to ⇒ "4 Repair Information", page 6.
- Reinstall cable ties that were loosened or cut off during removal at the same locations during installation.
- Move the selector lever into "P" position.
- Position the front wheels so they are in the straight-ahead position.
- Switch the ignition off.
- Remove the engine cover. Refer to ⇒ Engine Mechanical; Rep. Gr. 10; Engine Cover; Engine Cover, Removing and Installing.
- Unlock the retaining tab -arrow- and remove the left engine cover mount -1-.



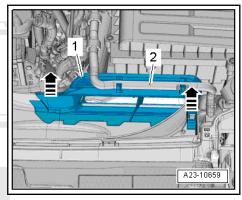
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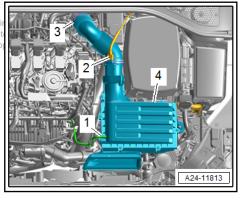
- Remove the bolts -1 and 3-.
- Release the catch -arrow- and remove the cover -2-.



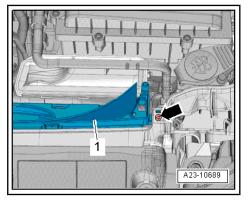
- Free up the coolant hose -2-.
- Release the catches -arrows- and remove the air duct upper section -1-.



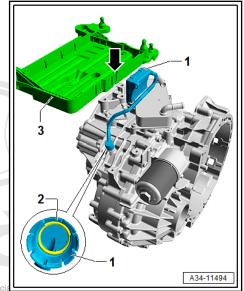
- Remove the vacuum hose -1-.
- Disconnect the connectored by copyright. Copyright for private or commercial purposes, the connectored by copyright to private or commercial purposes, a copyright to private or commercial purposes, and the connector of guarantees of copyright to private or commercial purposes, and the connector of the connector with respect to the correctness of information in this document. Co
- Loosen the hose clamp -3- and remove the air duct hose.
- Remove the air filter housing -4-.



- Remove the left and right bolt -arrow-.
- Unclip and remove the lower section -1- of the air duct.

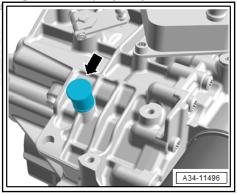


Remove the bleeder -1- with the bleeder hose from the locking mechanism -arrow- of the battery tray -3-.



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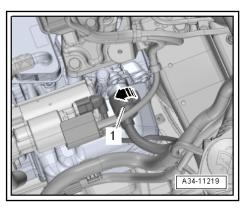
- If the bleeder hose is removed from the transmission bleed on in this pipe the bleed pipe must be sealed using a closure cap -arrow-.
- The closure cap should stop contamination from entering the transmission.
- Vehicles with engine compartment battery: remove the battery and the battery tray. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery Tray, Removing and Installing .

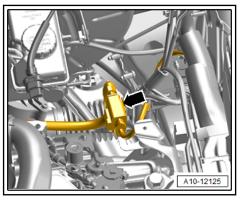




Risk of destroying due to electrostatic charge.

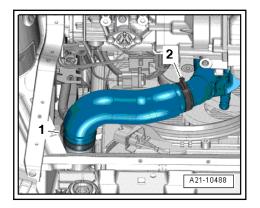
- Do not touch the connector terminals.
- Touch a grounded object (for example the hoist) and discharge any static electricity.
- Turn the twist lock counter-clockwise in the -direction of the arrow- and disconnect the connector -1- and remove.
- Disconnect the connector -arrow- for the Transmission Fluid Auxiliary Hydraulic Pump 1 - V475- .
- Remove the ground wire from the lower starter bolt.
- Remove the starter. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Starter; Starter, Removing and Installing.
- Remove the noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Noise Insulation, Removing and Installing.
- Remove the left front wheel housing liner. Refer to ⇒ Body Exterior; Rep. Gr. 66; Wheel Housing Liner; Front Wheel Housing Liner, Removing and Installing.



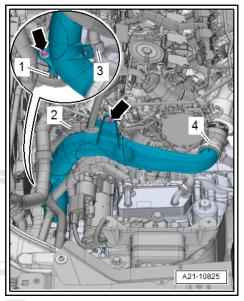


Audı

 Loosen the hose clamp -1- and remove the air duct hose from the charge air cooler.

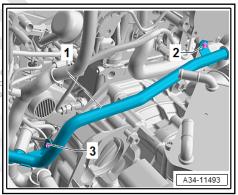


- Free up the wiring harnesses -1- and -2- on the air duct pipe.
- Loosen the screw-type clamp -4-.
- Remove the bolts -arrows- and remove the air duct pipe.
- Seal the open lines and connections with clean plugs from the Engine Bung Set - VAS 6122- .



- Remove the coolant pipe -1- over the transmission from the engine. To do so loosen the bolt -2- and remove the bolt -3-.
- Tie up the coolant pipe -1- on the engine. The coolant hose remains install on the coolant pipe.

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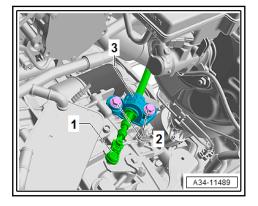


 Remove the ball socket -1- on the selector lever cable from the selector shaft lever using the Pry Lever - 80-200-.

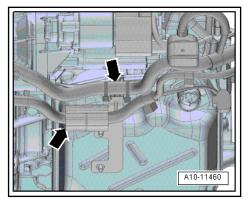


Risk of damaging the operating cable by deforming it.

- Never bend the operating cable too sharply or kink it.
- Remove the bolts -2- and tie up the cable bracket -3- together with the selector lever cable.



Free up the wiring harnesses on front of transmission -arrows-.



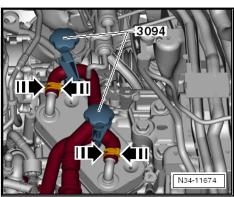
Place a cloth on the transmission fluid cooler and transmission to absorb escaping coolant.



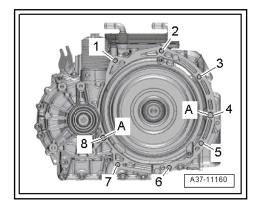
#### CAUTION

The cooling system is under pressure when the engine is warm. Risk of scalding due to hot steam and hot coolant. Burns to skin and other parts of the body are possible.

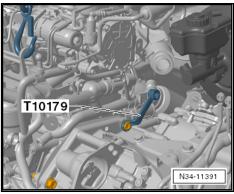
- Wear safety gloves.
- Wear protective eyewear.
- Reduce the pressure: cover the coolant reservoir cap with a cloth and carefully open.



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- Seal the open lines and connections with clean plugs from the Engine Bung Set - VAS 6122- .
- Remove the bolts -1, 2 and 3- from the transmission/engine connection.



The bolts -1 and 2- (previous illustration) can be removed and installed using the Insert Tool - 18mm - T10179- .



- One bolt is located inside the hole for the starter -arrow-. This bolt can be removed and installed with the Socket - Xzn 14 - T10061-.
- Support the engine in the installation position. Refer to ⇒ Engine Mechanical; Rep. Gr. 10 ; Subframe Mount; Engine, Supporting in Installation Position .
- Remove the subframe without the steering gear. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Subframe; Subframe without Steering Gear, Removing and Installing.
- Secure the subframe. Refer to  $\Rightarrow$  Suspension, Wheels, Steering; Rep. Gr. 40; Subframe; Subframe, Securing.
- Disconnect the exhaust system at the clamping sleeve -arrow-.



Incorrect handling can damage the coupling.

- Do not bend the coupling more than 10°.
- Do not load the coupling.
- Tie up the front exhaust pipe.

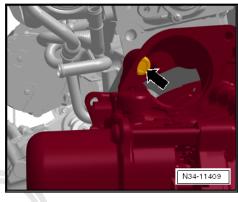
#### AWD Vehicles:

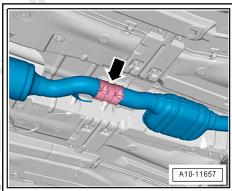
Remove the driveshalf from the bever box. Refer to min Realment Co Final Drive; Rep. Gr. 39; Driveshaft; Driveshaft, Removing and Installing.

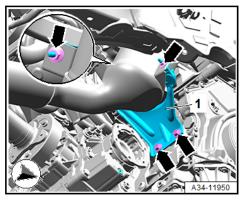
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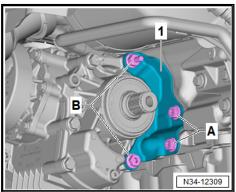
Loosen the bolts and nuts -arrows- and remove the bracket

Remove the bolts -A and B- and remove the bevel box bracket -1-.



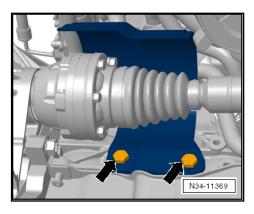


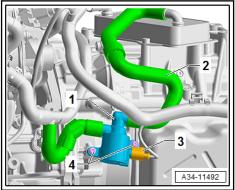




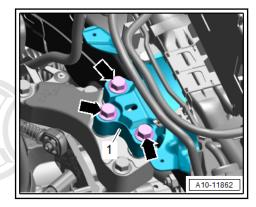
#### All Vehicles:

- Remove the right drive axle heat shield -arrows-. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle, Drive Axle Heat Shield, Removing and Installing.
- Remove the left and right drive axles from the transmission and tie them up. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle, Drive Axle, Removing and Instal-
- Make sure that the drive axle protective coating is not damaged.
- Disconnect the connector -3- from the Transmission Fluid Cooler Shut-Off Valve -1-.
- Remove the bolts -4- and tie up the Transmission Fluid Cooler Shut-Off Valve . The coolant hoses -2- remain installed.



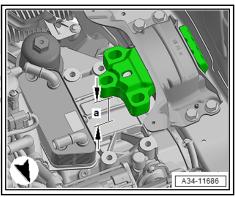


Remove the bolts -arrows- from the transmission mount.



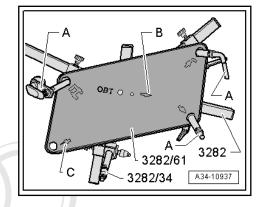
- Lower the engine/transmission assembly using the Engine Support Bridge - Spindle - 10 - 222 A /11- until the dimension -a- is reached between the transmission housing and the transmission mount.
- Dimension -a- = 90 mm.

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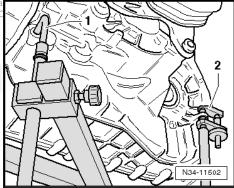
The Transmission Support - 3282- is equipped with the Transmission Support - Mounting Plate 61 - 3282/61- to remove the dual-clutch transmission 0GC.

- The Transmission Support 3282- is inserted in the Engine and Gearbox Jack V.A.G 1383 A- or Engine and Gearbox Jack - VAS 6931- .
- Align the Transmission Support arms so that they align with the holes in the Adjusting Plate.
- Install the mounting elements -A- on the Adjustment Plate as shown. The Transmission Support - Bolt - 3282/34- is used as the right rear mounting element. This mounting element is located outside of the Adjusting Plate .
- The mounting element -C- on the Adjusting Plate is not used.
- Position the Engine and Gearbox Jack V.A.G 1383 A- or Engine and Gearbox Jack - VAS 6931- under the vehicle.
- The arrow symbol -B- on the Mounting Plate points in direction of travel.
- Align the Transmission Support 3282- so that it is parallel to the transmission.

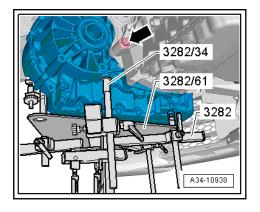


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- Insert the hook -1- in the dual-clutch transmission hount does not guar
- Secure the safety support -2- in the dual-clutch transmission mount.



- Install the Transmission Support Bolt 3282/34- in the transmission.
- Support the transmission from underneath using the Engine and Gearbox Jack.
- Remove the engine to transmission bolt -arrow-.



- Then remove the bolts -4 to 7- that connect the transmission to the engine.
- Separate the transmission from the alignment sleeves on the engine.
- Carefully lower the transmission using the Engine-Transmission Jack . Be sure not to pinch any lines while doing so.
- When lowering, change the transmission position using the spindles on the Transmission Support - 3282- .
- If necessary, when installing a new transmission refit the attachments.
- Selector lever cable bracket
- Bleeder with bleeder line
- Cable bracket on the oil pan (transmission cover)

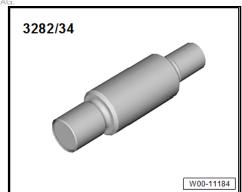
#### 3.1.3 Transmission, Removing, Vehicles with **TDI Engine**

Transmission Support - 3282-

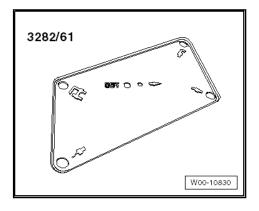


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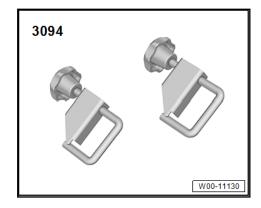
Transmission Support - Bolt - 3282/34-



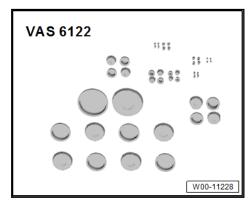
Transmission Support - Mounting Plate 61 - 3282/61-



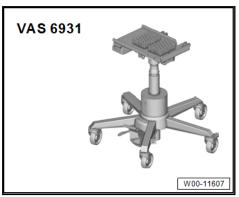
♦ Hose Clamps - Up To 25 mm - 3094-



◆ Engine Bung Set - VAS 6122-



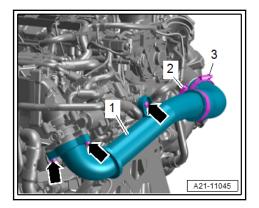
Engine and Gearbox Jack - VAS 6931-



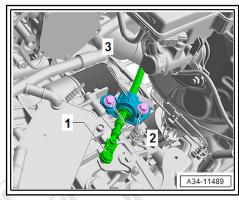
# **Procedure**

- Pay attention to Refer to ⇒ "4 Repair Information", page 6.
- ♦ Reinstall cable ties that were loosened or cut off during removal at the same locations during installation.
- Move the selector lever into "P" position.
- Pull the parking brake button to activate the electro-mechanical parking brake.
- Switch the ignition off.
- Vehicles with engine compartment battery: remove the battery and the battery tray. Refer to ⇒ Electrical Equipment;
   Rep. Gr. 27 PBattery: Battery: Removing and Instal, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- Remove the starter. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Starter; Starter, Removing and Installing.

- Remove the bolts -arrows-.
- Loosen the clamp -2- and remove the air guide pipe -1-.



- Pry out the selector lever cable -1- from the selector lever using the Pry Lever 80 200- .
- Remove the bolts -2- and tie up the cable bracket -3- together with the selector lever cable.



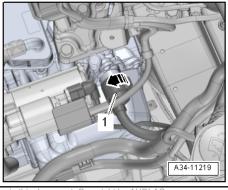
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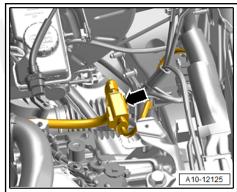
Risk of destroying due to electrostatic charge.

- Do not touch the connector terminals.
- Touch a grounded object (for example the hoist) and discharge any static electricity.
- Turn the twist lock counter-clockwise -arrow- to disconnect the connector -1- for the Dual-Clutch Transmission Mechatronic - J743-.

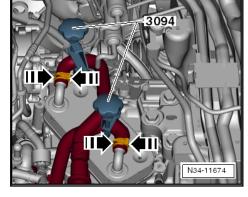
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Disconnect the connector -arrow- for the Transmission Fluid Auxiliary Hydraulic Pump 1 - V475- .

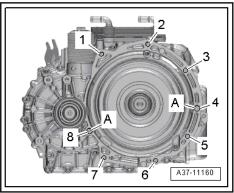




- Clamp off the coolant hoses on the transmission fluid cooler using the Hose Clamps - Up To 25mm - 3094-.
- Loosen the hose clamps -arrows- and remove the coolant hoses from the transmission fluid cooler.
- Seal the open lines and connections with clean plugs from the Engine Bung Set - VAS 6122- .



Remove all of the bolts for the transmission/engine connection that are accessible from above.



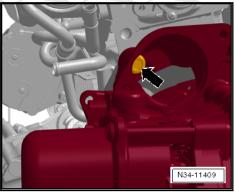
- One bolt is located inside the hole for the starter -arrow-.
   This bolt can be removed and installed with the Socket Xzn 14 T10061- .
- Support the engine in the installation position. Refer to
   ⇒ Engine Mechanical; Rep. Gr. 10; Subframe Mount; Engine, Supporting in Installation Position.
- Remove the subframe without the steering gear. Refer to
   ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Subframe;
   Subframe without Steering Gear, Removing and Installing.
- Remove the left and right drive axle from the transmission.
   Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40;
   Drive Axle; Drive Axle, Removing and Installing.
- Tie up the drive axles to the rear.

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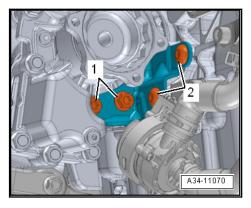
Make sure that the drive axle protective coating is not damed to the correctness of information in this document. Copyright by AUDI AG. aged.

#### **AWD Vehicles:**

- EA288 Gen1: Remove the ⇒ 4-Cylinder TDI Common Rail
   2.0L 4V Engine (EA 288 Gen I); Rep. Gr. 26; Exhaust
   Pipes/Muffler; Front Exhaust Pipe, Removing and Installing .
- EA288 Evo: Remove the slip catalyst. Refer to ⇒ 4-Cylinder TDI Common Rail 2.0L 4V Engine (EA 288 EVO); Rep. Gr. 26; Emissions Control System, Slip Catalysts, Removing and Installing.
- Remove the driveshaft from the bevel box. Refer to ⇒ Rear Final Drive; Rep. Gr. 39; Driveshaft; Driveshaft, Removing and Installing.

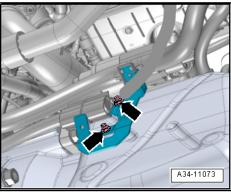


Remove the bolts -1 and 2- and remove the bevel box brack-



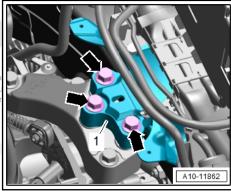
# All Vehicles:

Remove the nuts -arrows- and remove the front bracket from the transmission fluid pan.

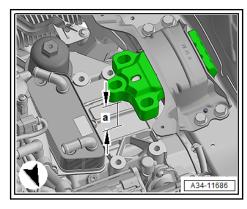


- Remove the bolts -arrows- from the transmission mount.





- Lower the engine/transmission assembly using the Engine Support Bridge - Spindle - 10 - 222 A /11- until the dimension -a- is reached between the transmission housing and the transmission mount.
- Dimension -a- = maximum 80 mm.

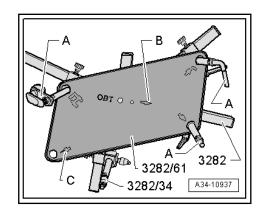


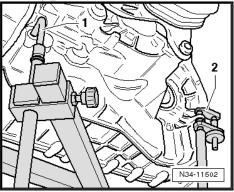
The Transmission Support - 3282- is equipped with the Transmission Support - Mounting Plate 61 - 3282/61- to remove the dual-clutch transmission 0GC.

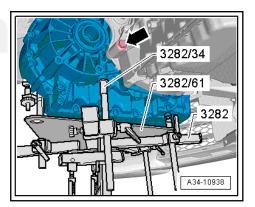
- The Transmission Support 3282- is inserted in the Engine and Gearbox Jack V.A.G 1383 A- or Engine and Gearbox Jack - VAS 6931- .
- Align the Transmission Support arms so that they align with the holes in the Adjusting Plate.
- Install the mounting elements -A- on the Adjustment Plate as shown. The Transmission Support - Bolt - 3282/34- is used as the right rear mounting element. This mounting element is located outside of the Adjusting Plate .
- The mounting element -C- on the Adjusting Plate is not used.
- Position the Engine and Gearbox Jack V.A.G 1383 A- or Engine and Gearbox Jack - VAS 6931- under the vehicle.
- The arrow symbol -B- on the Mounting Plate points in direction of travel.
- Align the Transmission Support 3282- so that it is parallel to the transmission.
- Insert the hook -1- in the dual-clutch transmission mount.
- Secure the safety support -2- in the dual-clutch transmission mount.



- Install the Transmission Support Bolt 3282/34- in the transmission.
- Support the transmission from underneath using the Engine and Gearbox Jack - VAS 6931- .

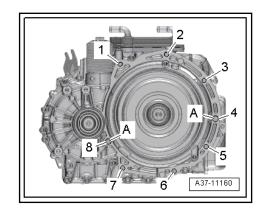








- Remove the remaining bolts for the transmission/engine connection.
- Remove the transmission from the alignment sleeves.
- Remove the transmission from the engine.
- Carefully lower the transmission with the Engine and Gearbox Jack .
- When lowering, change the transmission position using the spindles on the Transmission Support - 3282- .



#### 3.2 Transmission, Installing

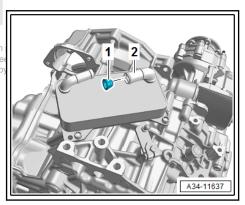
# Special tools and workshop equipment required

- ♦ High Temperature Grease G 052 133 A2-
- Refer to the "Transmission, Removing" procedure for a list of the special tools needed. Refer to  $\Rightarrow$  "3.1 Transmission, Removing", page 53
- Replace the bolts that were tightened with an additional turn.
- Replace the self-locking nuts and bolts as well as gaskets, seals and O-rings.
- Secure all hose connections with hose clamps corresponding to series production. Refer to the ⇒ Electronic Parts Catalog (ETKA).
- During installation, all cable ties must be installed at the same location.

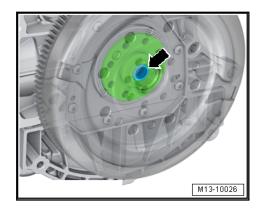
#### **Procedure**

Install in reverse order of removal while noting the following:

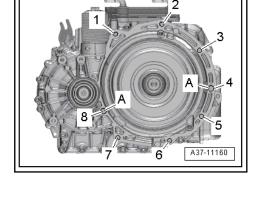
- Tightening specifications. Refer to ⇒ "3.3 Transmission Tightening Specifications", page 81
- Remove the screen -1- of the oil cooler carefully using a screwdriver and check for contamination.
- If necessary clean and clip in this creen against or commercial purposes, in permitted unless authorised by AUDI AG. AUDI AG does not guarante with respect to the correctness of information in this document. Cop

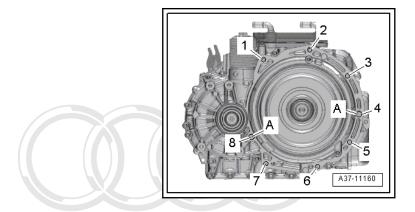


- Replace the needle bearing -arrow- in the crankshaft. Refer to ⇒ Engine; Rep. Gr. 13; Crankshaft; Needle Bearing in Crankshaft, Replacing.
- Grease the transmission pins (not the splines) lightly.



- Check if the alignment sleeves -A- for centering the engine/transmission are in the cylinder block and insert them if they are not.
- The missing alignment sleeves due to an offset from the engine and transmission lead to damage to the needle bearing in the crankshaft.
- Make sure the intermediate plate is seated correctly.
- Carefully raise the transmission using the Engine and Gearbox Jack and bring it into its installation position with the Transmission Support - 3282- .
- Insert the transmission without pinching any lines.
- Engine and transmission must be brought together by hand until both flanges contact all around!
- If this is not the case, adjust the transmission support until the engine and transmission align.
- Attach the transmission to the engine.







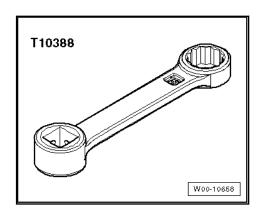
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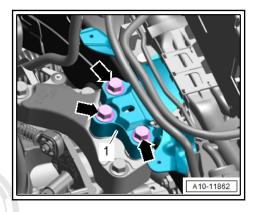


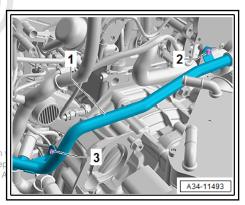
- Tighten the upper bolts -1 and 2- using the Insert Tool -18mm - T10179-; while doing so, note the changed tightening specification.
- The bolt -3- is only accessible via the opening for the removed starter. Use the Socket - Xzn 14 - T10061- for this
- The lower bolts -6 and 7- can be tightened with the Ring Wrench - 16mm - T10388- together with the Torque Wrench 1331 5-50Nm - V.A.G 1331- . At the same time note the changed tightening specification.
- Remove the Transmission Support 3282- from the transmission.
- Lift the engine/transmission assembly using the spindles on the Engine Support Bridge - 10 - 222 A-.
- Align the engine/transmission assembly in its installation position. To do so, lift it until the transmission is completely flat on the transmission mount.



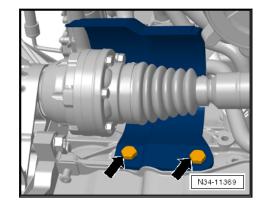
- Before installing the bolts -arrows- the transmission and transmission mount must be parallel to each other. If necessary, lift the transmission using the Engine and Gearbox Jack .
- Install the bolts -arrows- but only tighten by hand.
- Check the subframe mount adjustment. Adjust if necessary. Refer to ⇒ Engine Mechanical; Rep. Gr. 10; Assembly Mounts; Assembly Mounts, Adjusting .
- Only remove the Engine Support Bridge 10-222 A- when all assembly mount bolts are tightened to specification and the subframe is installed.
- Install the coolant pipe -1- on the engine. To do so, tighten the bolts -2 and 3-. Refer to ⇒ Engine Mechanical; Rep. Gr. 19; Coolant Pipes; Overview - Coolant Pipes.
- Install the coolant hoses on the transmission fluid cooler.
- Install the starter. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Starter; Starter, Removing and Installing
- To discharge any static electricity, touch a grounded object with hand (without wearing a glove). Refer to ⇒ page 8.
- Attach the connector for the Daying or private or commercial purposes, in part or in Attach the connector for the Daying or acceptance or acce chatronic - J743-randeturn-the-twist-lock-clockwise-to-lockdtpyright by
- Connections and routing. Refer to ⇒ Wiring diagrams, Troubleshooting & Component locations.
- 2.0L TFSI: Install the Transmission Fluid Cooler Shut-Off Valve on the transmission. Refer to ⇒ Engine; Rep. Gr. 19; Coolant Pump/Coolant Thermostat; Coolant Valve, Removing and Installing.
- Attach the drive axles to the transmission. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle, Removing and Installing.



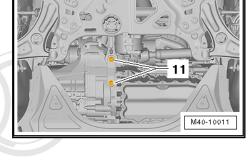




- 7-Speed Dual Clutch Transmission 0GC Edition 10.2023
- Install the right drive axle heat shield -arrows-. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle, Drive Axle Heat Shield, Removing and Installing.
- Install the subframe. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Subframe; Subframe without Steering Gear, Removing and Installing.

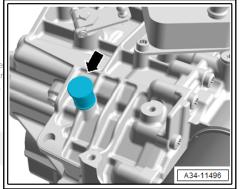


- Attach the pendulum support to the transmission by tightening the bolts -11-. Refer to ⇒ Engine Mechanical; Řep. Gr. 10; Assembly Mounts; Overview - Assembly Mounts.
- Assemble the exhaust system and align it without tension. Refer to ⇒ Engine Mechanical; Rep. Gr. 26; Exhaust Pipes/Muffler; Exhaust System, Aligning without Tension.
- Install the air duct pipe with air duct hose. Refer to ⇒ Engine Mechanical; Rep. Gr. 21; Charge Air System; Overview -Charge Air System .
- Install the selector lever cable on the dual-clutch transmission. Refer to ⇒ "2.6 Shift Mechanism, Removing and Instal-
- Adjust the selector lever cable. Refer to ⇒ "2.8 Selector Lever Cable, Checking and Adjusting", page 48
- If the transmission is replaced or the bleeder line is removed from the transmission: remove the closure cap -arrow-.



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- If the bleeder -1- with the bleeder hose is installed on the transmission, the O-ring -2- must be located in the bleeder hose elbow.
- If removed, install the battery tray -3-. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery Tray, Removing and Installing.
- Clip in the bleeder -1- in the locking mechanism -arrow- of the battery tray.
- Install the battery, if removed. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Overview - Battery
- Check the coolant level. Refer to ⇒ Engine Mechanical; Rep. Gr. 19; Cooling System/Coolant; Coolant, Draining and Filling .
- Install the air filter housing. Refer to ⇒ Engine; Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing or ⇒ Engine; Rep. Gr. 24; Air Filter; Overview - Air Filter Housing.
- Install the engine cover. Refer to ⇒ Engine Mechanical; Rep. Gr. 10; Engine Cover; Engine Cover, Removing and Protected by copyright. Copyring for private of commercial purposes, in part or in whole, is not Installing permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability
- Install the left front wheel housing liner. Refer to ⇒ Body

  Exterior: Page 27-20-14" Exterior; Rep. Gr. 66; Wheel Housing Liner; Overview -Front Wheel Housing Liner.
- Install the noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview - Noise Insulation.
- Install the front wheels. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 44; Wheels, Tires.

#### If the transmission was replaced, a basic setting must be performed.

- Select Individual test on the ⇒ Vehicle diagnostic tester.
- Dual clutch transmission 0GC
- 01 OBD-capable systems
- 02 Transmission electronics
- 02 Transmission electronic functions
- 02 Mechatronic, replacing

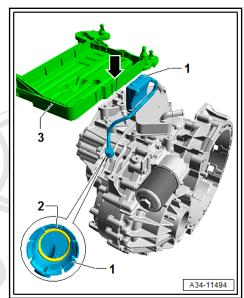
#### 3.3 **Transmission Tightening Specifications**

- ⇒ "3.3.1 Transmission Tightening Specifications, 2.0L TFSI Engine, 2.0L TDI Engine", page 81
- <u> "3.3.2 Transmission Tightening Specifications, 2.0L TFSI evo,</u> ⇒ 3.3.∠ 11ano.... 2.0L TDI evo", page 82
- "3.3.3 Transmission Tightening Specifications, 2.0L TDI evo (T6F)", page 83
- ⇒ "3.3.4 Transmission Tightening Specifications, 1.5L TFSI Engine", page 84

# **Transmission Tightening Specifica-**3.3.1 tions, 2.0L TFSI Engine, 2.0L TDI Engine

#### Note:

The tightening specifications apply only to lightly greased, oiled, phosphated or blackened nuts and bolts.



- Additional lubricants, such as engine oil or transmission fluid are permitted, but lubricants containing graphite are not.
- Do not use any ungreased parts.
- Tightening specification tolerance: ± 15%.

Assembly mounts. Refer to <u>⇒ "5.1 Overview - Assembly</u> Mounts", page 93

# Transmission to Engine, 2.0L TFSI and 2.0L TDI:

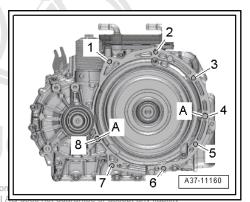
Item	Bolt	Tightening specifi- cation
1 and 2	M12 x 50	80 Nm • With Insert Tool - 18mm T10179: 65 Nm
3		80 Nm • With Insert Tool - 18mm T10179: d by copyrigh 65 Nm for privated unless authorised by AUDI AG
4	M12 x 60 with	respect to the owner these of info
5, 6 and 7	M10 x 50	40 Nm • With Ring Wrench - 16mm T10388: 30 Nm
8	M12 x 70	80 Nm
А	Alignment sleev	es for centering

Component	Tightening Specification
Cable bracket on the oil pan (transmission cover)	10 Nm
Ground wire on the lower starter bolt	20 Nm

#### 3.3.2 Transmission Tightening Specifications, 2.0L TFSI evo, 2.0L TDI evo

# Note:

- The tightening specifications apply only to lightly greased, oiled, phosphated or blackened nuts and bolts.
- Additional lubricants, such as engine oil or transmission fluid are permitted, but lubricants containing graphite are not.
- Do not use any ungreased parts.
- Tightening specification tolerance: ± 15%.





# Assembly mounts. Refer to ⇒ "5.1 Overview - Assembly Mounts", page 93

# Transmission to Engine, 2.0L TFSI and 2.0L TDI:

Item	Bolt	Tightening specifi- cation
1,2,3	M12 x 60	80 Nm • With Insert Tool - 18mm T10179: 65 Nm
4	M12 x 80	80 Nm
5, 6 and 7	M10 x 60	40 Nm • With Ring Wrench - 16mm T10388: 30 Nm
8	M12 x 80	80 Nm
A	Alignment sleeves for centering	

2 1 1 3 A A A A A A A A A A A A A A A A A
---

Component	Tightening Specification
Cable bracket on the oil pan (transmission cover)	10 Nm
Ground wire on the lower starter bolt	20 Nm

#### 3.3.3 Transmission Tightening Specifications, 2.0L TDI evo (T6F)

#### Note:

- The tightening specifications apply only to lightly greased, oiled, phosphated or blackened nuts and bolts.
- Additional lubricants, such as engine oil or transmission fluid are permitted, but lubricants containing graphite are not.
- Do not use any ungreased parts.
- Tightening specification tolerance: ± 15%. Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.

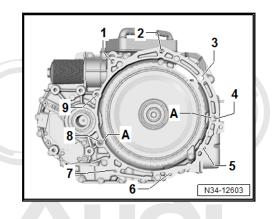


# ιδυΑ

Assembly mounts. Refer to ⇒ "5.1 Overview - Assembly Mounts", page 93

# Transmission to engine, 2.0L TDI Engine:

Item	Bolt	Tightening specifi- cation
1, 2 and 3	M12 x 70	80 Nm • With Insert Tool - 18mm T10179: 65 Nm
4, 8 and 9	M12 x 80	80 Nm • With Insert Tool - 18mm T10179: 65 Nm
5, 6 and 7	M10 x 60	40 Nm • With Ring Wrench - 16mm T10388: 30 Nm
Δ.	Alienana ant ala ar	permitted



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Component	Tightening Specification
Cable bracket on the oil pan (transmission cover)	10 Nm
Ground wire on the lower starter bolt	20 Nm

#### 3.3.4 Transmission Tightening Specifications, 1.5L TFSI Engine

# Note:

- The tightening specifications apply only to lightly greased, oiled, phosphated or blackened nuts and bolts.
- Additional lubricants, such as engine oil or transmission fluid are permitted, but lubricants containing graphite are not.
- Do not use any ungreased parts.
- Tightening specification tolerance: ± 15%.



Assembly mounts. Refer to ⇒ "5.1 Overview - Assembly Mounts", page 93

# Transmission to Engine, 1.5L TFSI:

Item	Bolt	Tightening specifi- cation
		Callon
1, 2 and 3	M12 x 70	80 Nm • With Insert Tool - 18mm T10179: 65 Nm
4, 8 and 9	M12 x 80	80 Nm • With Insert Tool - 18mm T10179: 65 Nm
5, 6 and 7	M10 x 60	40 Nm • With Ring Wrench - 16mm T10388: 30 Nm
Α	Alignment sleev	es for centering

Item	Bolt	Tightening specifi- cation
1, 2 and 3	M12 x 70	80 Nm • With Insert Tool - 18mm T10179: 65 Nm
4, 8 and 9	M12 x 80	80 Nm • With Insert Tool - 18mm T10179: 65 Nm
5, 6 and 7	M10 x 60	40 Nm • With Ring Wrench - 16mm T10388: 30 Nm
Α	Alignment sleev	es for centering

1 2 3
9 A A 3 A
7 6 N34-12603

Component	Tightening Specification
Cable bracket on the oil pan (transmission cover)	10 Nm
Ground wire on the lower starter bolt	20 Nm



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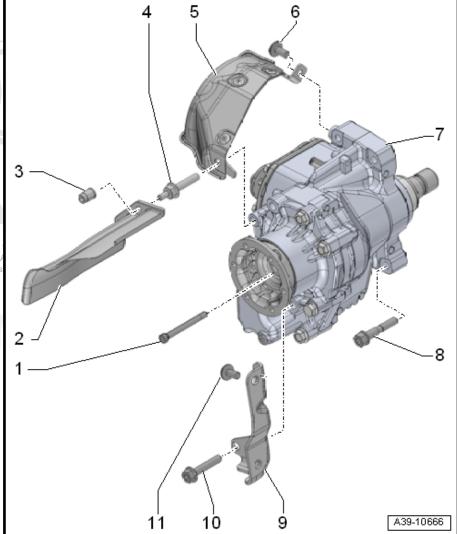


#### **Bevel Box** 4

- ⇒ "4.1 Overview Bevel Box", page 86
- ⇒ "4.2 Bevel Box, Removing", page 86
- ⇒ "4.3 Bevel Box, Installing", page 90
- ⇒ "4.4 Bevel Box, Tightening Specification", page 91

#### 4.1 Overview - Bevel Box

- 1 Bolt
  - □ 25 Nm
- 2 Heat Shield
  - For drive axle
- 3 Bolt
  - □ 20 Nm
- 4 Bolt
  - □ 40 Nm
- 5 Heat Shield
  - For driveshaft
- 6 Bolt
  - □ 20 Nm
- 7 Bevel Box cted by copyright. Copying permitted unless authorised by
  - ☐ RemovingspReferetor ctne <u>'4.2 Bevel Box, Remov-</u> ing", page 86.
  - □ Installing. Refer to ⇒ <u>"4.3 Bevel Box, Instal-</u> ling", page 90.
- 8 Bolt
  - □ Replace after removing
  - ☐ Tightening Specification. Refer to ⇒ "4.4 Bevel Box, Tightening Specification", <u>page 91</u>.
- 9 Bracket
  - Different versions
- 10 Bolt
  - ☐ Tightening specification and sequence. Refer to ⇒ "4.4 Bevel Box, Tightening Specification", page 91.

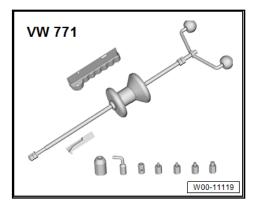


☐ Tightening specification and sequence. Refer to ⇒ "4.4 Bevel Box, Tightening Specification", page <u>91</u> .

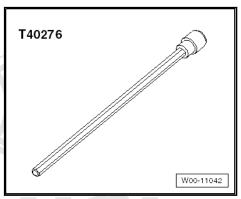
#### 4.2 Bevel Box, Removing

Special tools and workshop equipment required

♦ Slide Hammer Set - VW 771-



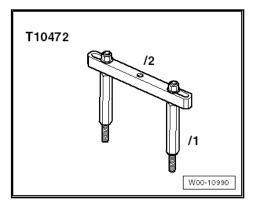
♦ Socket - 8mm - T40276-



♦ Holding Fixture - Spacers - VW 540/1 B-

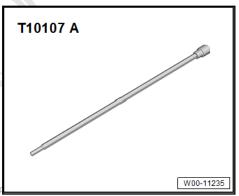


♦ Puller - Bevel Gear - T10472-



Socket and Extended Bit - T10107A-

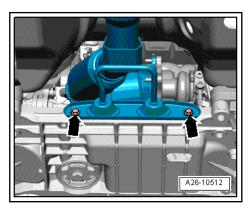




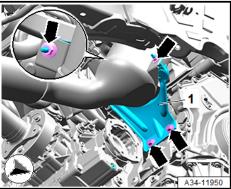
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# Removing

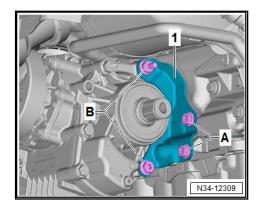
- Remove the subframe with the steering gear. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Subframe; Subframe with Steering Gear, Removing and Installing.
- Remove the driveshaft from the bevel box. Refer to ⇒ Rear Final Drive; Rep. Gr. 39; Driveshaft; Driveshaft, Removing and Installing .
- Remove the right drive axle from the bevel box and tie it up toward the rear. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle, Drive Axle, Removing and Installing .
- Remove the bolts -arrows- and remove the bracket for the pre-catalytic converter.



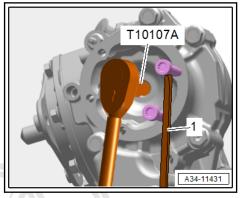
Loosen the bolts and nuts -arrows- and remove the bracket -1-.



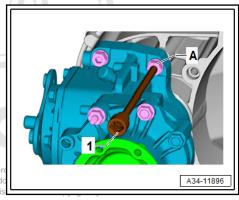
Remove the bolts -A and B- and remove the bevel box bracket -1-.



Remove the right flange shaft bolt using the Socket and Extended Bit - T10107A- by installing two bolts in the flange and counterholding the flange shaft with an assembly lever -1-.

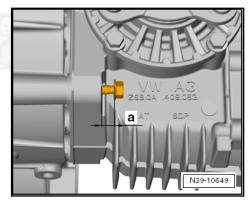


- Remove the upper bolts for the bevel box attachment to the transmission.
- Use the Socket 8mm T40276- -1- to remove the bolt -A-.

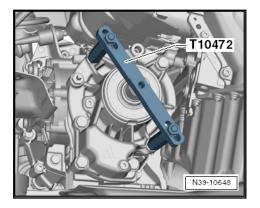


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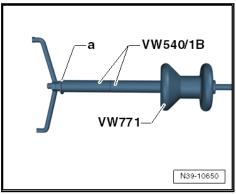
- Only loosen the lower bolts -arrows- for securing the bevel box on the transmission and remove up to dimension -a-.
- Dimension -a- = 15 mm.
- This prevents the transmission from falling when loosening with the Slide Hammer Set - VW 771-.



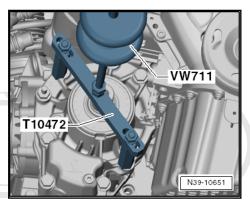
 Install the Puller - Bevel Gear - T10472- on the bevel box as shown.



 Prepare the Slide Hammer Set - VW 771- with a washer -aand two sleeves from the Holding Fixture - Spacers - VW 540/1 B- as shown.



- Fasten the Slide Hammer Set VW 771- to the Puller Bevel Gear - T10472- and detach the bevel box to the transmission.
- Remove the slide hammer and puller.
- Remove the lower bolts and remove the bevel box.



# 4.3 Bevel Box, Installing

# Special tools and workshop equipment required

◆ Refer to the ⇒ Electronic Parts Catalog (ETKA) for the grease for clutch plate splines.

#### Installing

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Install in the reverse order of removal while noting the following:

◆ Tightening specifications. Refer to ⇒ "4.4 Bevel Box, Tightening Specification", page 91.



- Grease the splines on the bevel box.
- Insert the bevel box and press it all the way on the transmission.

#### Tip

- If the tooth position is incorrect the bevel box cannot be pressed against the transmission. To do so turn the flange shaft.
- If the tooth position is correct and it is guided centered, the bevel box slides against the transmission all the way.
- Tighten the bevel box. Refer to ⇒ Fig. "Bevel Box on Dual-Clutch Transmission - Tightening Specification", page 91.
- Install the driveshaft. Refer to ⇒ Rear Final Drive; Rep. Gr. 39; Driveshaft; Driveshaft, Removing and Installing.
- Install the drive axle. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Overview - Drive Axle.
- Install the drive axle heat shield. Refer to ⇒ Suspension. Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle Heat Shield, Removing and Installing.
- Install the subframe with the steering gear. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Subframe; Subframe with Steering Gear, Removing and Installing.
- Check the gear oil level in bevel box. Refer to <u>⇒ "3.1 Gear</u>" Oil, Checking Level", page 124.



- ◆ Flange shaft bolt: ⇒ Item 1 (page 86)
- Overview drive axle. Refer to > Suspension wheels authorised by AUDI AG. AUDI AG does not guarantee or accept any liability Steering; Rep. Gr. 40; Drive Axle; Overview with Drive Axle; correctness of information in this document. Copyright by AUDI AG.

#### 4.4 Bevel Box, Tightening Specification

Bevel Box on Dual-Clutch Transmission - Tightening Specifica-

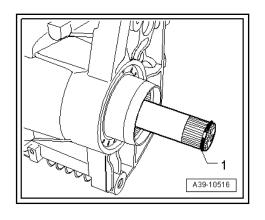
- Replace the bolts after removing them.
- Tighten the bolts in steps as follows:

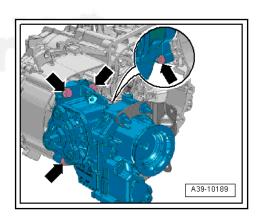
Step	Bolts	Tightening Specification/Additional Turn
1.	-arrows-	Install all the way by hand
2.	-arrows-	40 Nm diagonally
3.	-arrows-	90° additional turn, diagonally

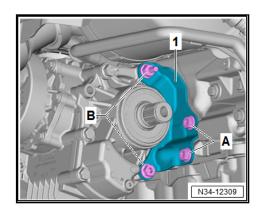
# Bracket Version 1 for Bevel Box - Tightening Specification and Sequence

Tighten the bolts in steps as follows:

Step	Bolts	Tightening Specification
1.	-A and B-	Install all the way by hand
2.	-A-	8 Nm
3.	-B-	8 Nm
4.	-A-	40 Nm
5.	-B-	40 Nm







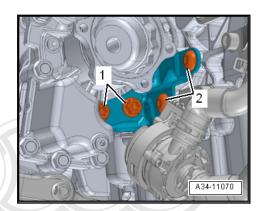
# Bracket Version 2 for Bevel Box - Tightening Specification and Sequence

Tighten the bolts in steps as follows:

Step	Bolts	Tightening Specification
1.	-1-	Install all the way by hand
2.	-2-	40 Nm
3.	-1-	40 Nm

# Additional tightening specifications

♦ Refer to ⇒ Engine Mechanical; Rep. Gr. 26; Emissions Control System; Overview - Emissions Control System.





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5 **Assembly Mounts** 

⇒ "5.1 Overview - Assembly Mounts", page 93

**Overview - Assembly Mounts** 5.1



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# 1 - Engine Support

□ Removing and Installing. Refer to ⇒ Engine Mechanical; Rep. Gr. 13; Cylinder Block, Belt Pulley Side; Engine Support, Removing and Installing.

# 2 - Engine Mount

- With support arm
- □ Removing and Installing. Refer to ⇒ Engine Mechanical; Rep. Gr. 10; Assembly Mounts; Engine Mount, Removing and Installing.

#### 3, 4, 5 - Bolt

☐ Tightening specification. Refer to ⇒ Engine Mechanical; Rep.
 Gr. 10; Assembly Mounts; Overview - Assembly Mounts

# 6 - Bracket

Equipped on some models

# 7, 8, 9 - Bolt

□ Tightening specification. Refer to ⇒ Engine Mechanical; Rep. Gr. 10; Assembly Mounts; Overview - Assembly Mounts

# 10 - Pendulum Support

□ Removing and Installing. Refer to ⇒ Engine Mechanical; Rep. Gr. 10; Assembly Mounts; Pendulum Support, Removing and Installing.

# 11 - Bolt

- Replace after removing
- ☐ 130 Nm +90°

#### 12, 13 - Bolt

- □ Replace after removing
- □ 60 Nm +90°

#### 14 - Bolt

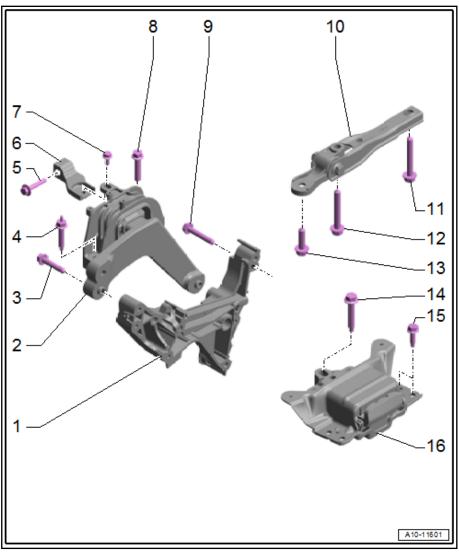
- □ Replace after removing
- □ 60 Nm +90°

# 15 - Bolt

- Replace after removing
- □ 50 Nm +90°

#### 16 - Transmission Mount

□ Removing and Installing. Refer to ⇒ Engine Mechanical; Rep. Gr. 10; Assembly Mounts; Transmission Mount, Removing and Installing.

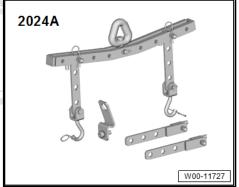


#### Transmission, Transporting 6

Special tools and workshop equipment required

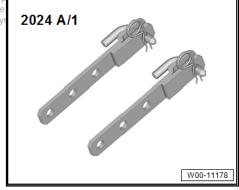
♦ Engine Sling - 2024A-



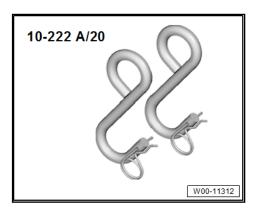


♦ Engine Sling - Engine Brate with respect to the correctness of information in this document. Copy

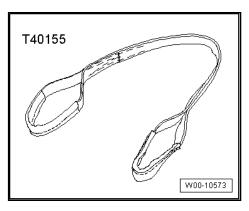




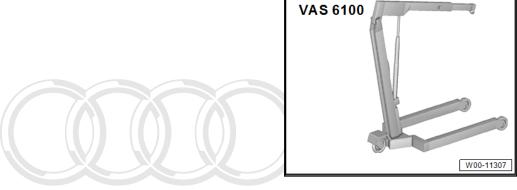
♦ Engine Support Bridge - Special Hook - 10-222A/20-



♦ Quantity: two, Holding Strap - T40155A-



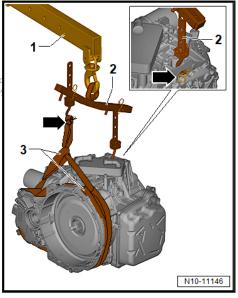
Shop Crane - VAS 6100-



# **Procedure**

- Position the Holding Strap T40155A- (quantity: 2) as shown around the transmission.
- Engage the Shop Crane VAS 6100- with the Engine Sling -2024A- -arrows-.

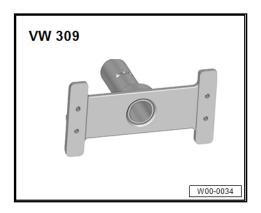
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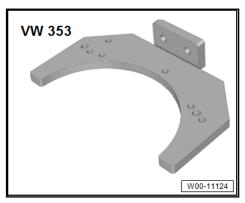
#### Securing on Engine and Transmis-7 sion Holder

Special tools and workshop equipment required

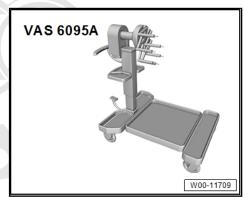
- ♦ Holding Plate VW 309A-
- or Holding Plate VW 309 A-



Transmission Support - VW 353-



♦ Engine and Gearbox Bracket - VAS 6095A-



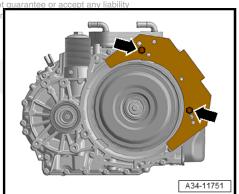
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# Transmission, Securing to Engine/Fransmission: Holder mation in this doct

Mount the transmission to the Transmission Support - VW 353- and place it, with the Holding Plate - VW 309- in the Engine and Gearbox Bracket VAS 6095A - VAS 6095- .

Fluid leakage when turning the transmission.

Vents for the transmission housing must be closed when turning a filled transmission on the engine and transmission holder with the bleeder downward.



#### 8 **Transmission Fluid Circuit**

- ⇒ "8.1 Overview Transmission Fluid Circuit", page 98
- ⇒ "8.2 Transmission Fluid Cooler, Removing and Installing", page 99
- ⇒ "8.3 Transmission Fluid Filter, Removing and Installing", page
- ⇒ "8.4 Engine for Transmission Fluid Auxiliary Hydraulic Pump 1 V475 , Removing and Installing", page 104

#### Overview - Transmission Fluid Circuit 8.1



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- 1 Bleeder Cap
- 2 O-Rings
  - □ Replace
- 3 Bolt
  - □ 20 Nm

#### 4 - Transmission Fluid Cooler

Removing and Installing. Refer to 8.2 Transmission Fluid Cooler, Removing and Installing", page 99.

# 5 - Transmission or printed unless authorised by AUDI

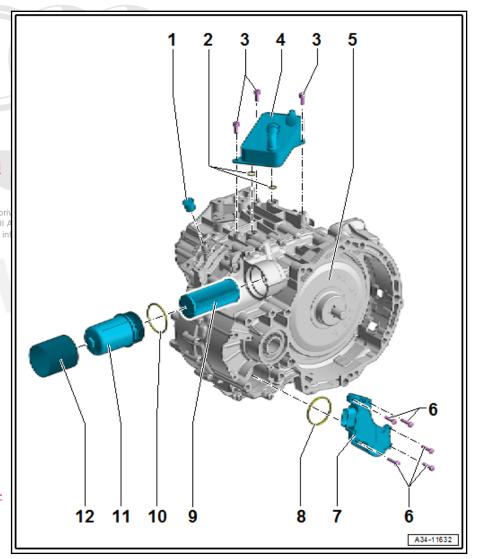
Removing and Instals of ling. Refer to ⇒ <u>"3 Transmission, Re-</u> moving and Installing", page 53.

#### 6 - Bolt

- □ Replace
- Depending on the version different bolt lengths
- ☐ M6x30: 8 Nm + 45°
- ☐ M6x25: 8 Nm + 90°

#### 7 - Engine for Transmission Fluid Auxiliary Hydraulic Pump 1 - V475-

Removing and Installing. Refer to ⇒ "8.4 Engine for Transmission Fluid Auxiliary Hydraulic Pump 1 V475, Removing and Installing page 104



#### 8 - Seal

□ Replace

# 9 - Transmission Fluid Filter

- Notes for oil change and filter replacement. Refer to ⇒ "4.1 General Information", page 6.
- ☐ Removing and Installing. Refer to ⇒ "8.3 Transmission Fluid Filter, Removing and Installing", page

#### 10 - O-Ring

- Replace
- Coat with gear oil

# 11 - Filter Housing

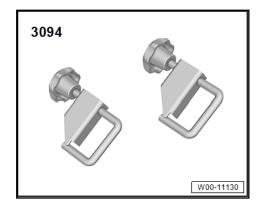
□ 50 Nm

12 - Heat Shield

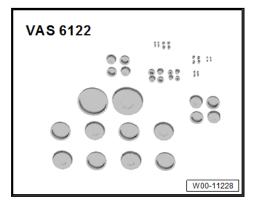
#### 8.2 Transmission Fluid Cooler, Removing and Installing

Special tools and workshop equipment required

Hose Clamps - Up To 25 mm - 3094-



Engine Bung Set - VAS 6122-



# Removing

- Move the selector lever to "P".
- Remove the air filter housing. Refer to ⇒ Engine; Rep. Gr. 23 ; Air Filter; Air Filter Housing, Removing and Installing or ⇒ Rep. Gr. 24 ; Air Filter; Air Filter Housing, Removing and Installing.
- Vehicles with engine compartment battery: remove the battery and the battery tray. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery Tray, Removing and Installing .

# CAUTION

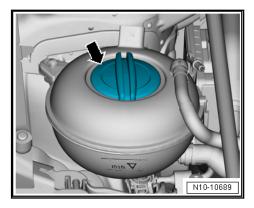
The cooling system is under pressure when the engine is warm. Risk of scalding due to hot steam and hot coolant. Burns to skin and other parts of the body are possible.

- Wear safety gloves.
- Wear protective eyewear.
- Reduce the pressure: cover the coolant reservoir cap with a cloth and carefully open.

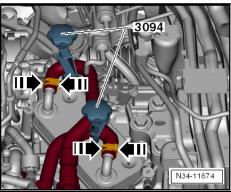
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- Open the coolant expansion tank cap -arrow-.
- Place a lint-free cloth on to transmission fluid cooler and transmission to absorb escaping coolant.



- Loosen the hose clamps -arrows-, then clamp off the coolant hoses to the transmission fluid cooler using Hose Clamps -Up To 25mm - 3094- and remove them.
- Seal the open lines and connections with clean plugs from the Engine Bung Set - VAS 6122- .
- Cover the transmission with cloths to catch any escaping coolant.

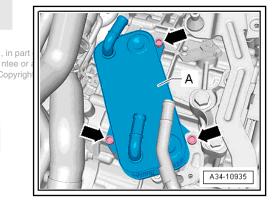


Remove the bolts -arrows- and the transmission fluid cooler



Transmission damage due to contaminated transmission fluid. Copyrig

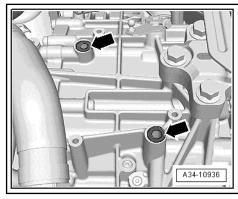
Coolant must not drip into the transmission.



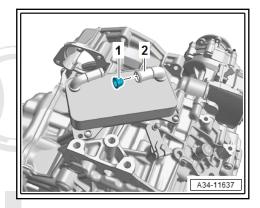
# Installing

Install in the reverse order of removal while noting the following:

- ♦ Replace the O-rings -arrows- after removal.
- Coat the O-rings with transmission fluid before inserting to prevent the rings from being crushed during assembly.
- If there is damage to the sealing surface of the transmission fluid cooler it must be replaced.



- Remove the screen -1- of the oil cooler carefully using a screwdriver and check for contamination.
- If necessary clean and clip in the screen again.



- Carefully position the transmission fluid cooler -A-. At the same time pay attention to the sealing surface and the Orings. Protected by copyright. Copying for private or commercial purposes
- Position the bolts -arrowstein steps diagonally AG. AUDI AG does not guara with respect to the correctness of information in this document. C
- Install the air duct pipe with air duct hose. Refer to  $\Rightarrow$  Engine Mechanical; Rep. Gr. 21; Charge Air System; Overview Charge Air System .
- Install the battery and the battery tray if they were removed. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Overview - Battery .
- Install the air filter housing. Refer to ⇒ Engine Mechanical; Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing or ⇒ Engine Mechanical; Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- Check the transmission fluid level land fill. Refer to ⇒ "9.3 Transmission Fluid Level, Checking", page 108.
- Check the coolant level. Refer to ⇒ Engine Mechanical; Rep. Gr. 19; Cooling System/Coolant; Coolant, Draining and Filling .

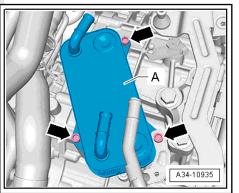
# **Tightening Specifications**

Transmission fluid cooler at transmission. Refer to ⇒ '8.1 Overview - Transmission Fluid Circuit", page 98.

#### 8.3 Transmission Fluid Filter, Removing and Installing

- The transmission fluid filter usually does not need to be replaced.
- Change the transmission fluid filter "yes or no". Refer to ≥ "4.1 General Information", page 6

Special tools and workshop equipment required



Used Oil Collection and Extraction Unit - SMN372500-



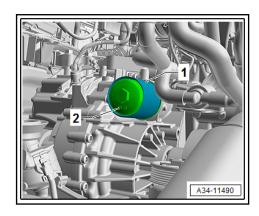
#### Removing

- Remove the one piece or front noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview -Noise Insulation .
- Remove the air filter housing. Refer to ⇒ Engine Mechanical; Rep. Gr. 23 ; Air Filter; Air Filter Housing, Removing and Installing or ⇒ Engine Mechanical; Rep. Gr. 24 ; Air Filter; Air Filter Housing, Removing and Installing.
- per lifequipped, remove the tunnel underbody trim panel. Refer wito அ Body Exterior Rep Gr ம 66 ம Underbody Trim Panel; Overview - Underbody Trim Panels .
- Vehicles with engine compartment battery: remove the battery and the battery tray. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Battery Tray, Removing and Installing .
- Place the Used Oil Collection and Extraction Unit -SMN372500- under the transmission.

#### Tip

- A residual amount of transmission fluid remains in the filter. This will drain out when removing the filter housing.
- ♦ Cover the area around the transmission fluid filter with some cloths before removing the filter housing.
- Thoroughly clean any lubricated areas on the transmission.
- Unscrew the filter housing -2- and remove it with the filter

Replace a missing or damaged heat shield -1-.



# Installing

Install in the reverse order of removal while noting the following:

- Replace the O-ring after removal.
- Insert the filter element -1- with the suction collar -arrow- into the transmission.
- Tighten the filter housing.
- Install the battery and the battery tray if they were removed. Refer to ⇒ Electrical Equipment; Rep. Gr. 27; Battery; Overview - Battery .
- Install the air filter housing. Refer to ⇒ Engine Mechanical; Rep. Gr. 23; Air Filter; Air Filter Housing, Removing and Installing or ⇒ Engine Mechanical; Rep. Gr. 24; Air Filter; Air Filter Housing, Removing and Installing.
- Check the transmission fluid level land fill. Refer to ≥ "9.3 Transmission Fluid Level, Checking", page 108.
- Install the noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview - Noise Insulation.

# Tightening Specifications

- Filter housing to transmission. Refer to <u>⇒ "8.1 Overview -</u> Transmission Fluid Circuit", page 98
- Cable mounting bracket to transmission. Refer to ≥ 2.2 Overview - Shift Mechanism", page 34

# 8.4 **Engine for Transmission Fluid Auxiliary** Hydraulic Pump 1 - V475-, Removing and Installing

# Special tools and workshop equipment required

♦ Puller - T10530-

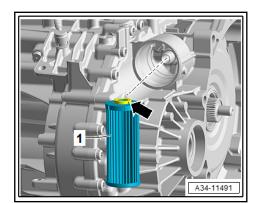


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# T10530 W00-11460

# Removing

- Drain the transmission fluid. Refer to <u>⇒ "9.4 Transmission</u> Fluid, Draining and Filling", page 111.
- AWD vehicles, remove the bevel box. Refer to ⇒ "4.2 Bevel Box, Removing", page 86.
- FWD vehicles: remove the right drive axle from the transmission. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40 ; Drive Axle; Drive Axle, Removing and Installing .



N34-12490

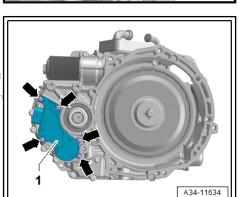
Disconnect the connector for the Transmission Fluid Auxiliary Hydraulic Pump 1 - V475- .



- Remove the bolts -arrows-.



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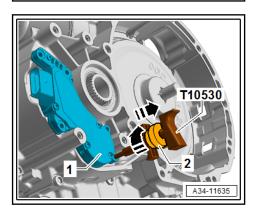
- Guide the Puller T10530- in hole.
- Turn the knurled nut -2- clockwise until the puller clamps.
- Using the Puller T10530- carefully remove the pump motor horizontally to the side.

# Installing

- Seal, replacing
- Push the pump motor by hand evenly in the housing.
- Tighten the pump motor.
- Install the bevel box. Refer to ⇒ "4.2 Bevel Box, Removing", <u>page 86</u> .
- Fill the transmission fluid (refer to <u>⇒ "9.4 Transmission Fluid,</u> <u>Draining and Filling", page 111</u>) and check the transmission fluid level (refer to ⇒ "9.3 Transmission Fluid Level, Checking", page 108).

# **Tightening Specifications**

Refer to ⇒ "8.1 Overview - Transmission Fluid Circuit", page



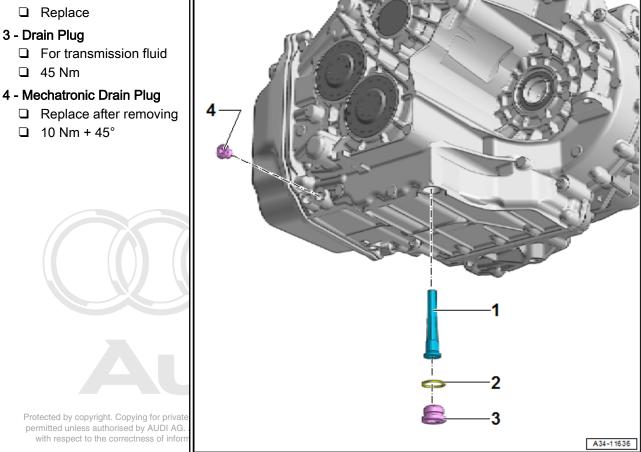
#### 9 Transmission Fluid

- ⇒ "9.1 Overview Drain and Check Plugs", page 106
- ⇒ "9.2 Tools for Transmission Fluid Change", page 106
- ⇒ "9.3 Transmission Fluid Level, Checking", page 108
- ⇒ "9.4 Transmission Fluid, Draining and Filling", page 111

#### 9.1 Overview - Drain and Check Plugs

# 1 - Overflow Pipe

- □ 3 Nm
- ☐ Pay attention to the different versions
- 2 Seal
- 3 Drain Plug



## 9.2 Tools for Transmission Fluid Change

Special tools and workshop equipment required

Oil Filler - VAS 6262A- with Oil Filler - Adapter 1 - VAS 6262/1-



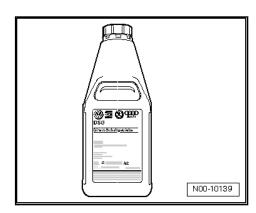
♦ Used Oil Collection and Extraction Unit - SMN372500-



If necessary: Oil Filler - Adapter 6 - VAS 6262/6- or Oil Filler - Adapter - VAS 6262/7-



Original 1 liter transmission fluid container and dual-clutch transmission fluid. Refer to ⇒ Electronic Parts Catalog (ET-KA) for the part number.





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- Protective Eyewear
- Acid-Resistant Safety Gloves

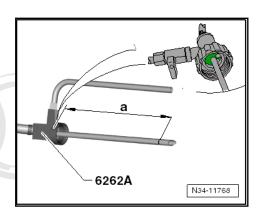
# 7-Speed Dual Clutch Transmission 0GC - Edition 10.2023

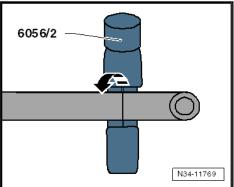
# Bleed Pipe Length, Measuring on Oil Filler - VAS 6262A- and Shortening if Necessary

The pipe must be shorted to dimension -a- so that the bleed pipe on the adapter for the Oil Filler - VAS 6262 A- does not touch the bottom on some containers.

- Dimension -a- = 210 mm
- Dimension -a- is measured starting from the shaft (the green surface in the magnified area) on the adapter for the Oil Filler - VAS 6262 A- .
- Mark the dimension on the bleed pipe and shorten it using the Brake Line Tool Kit - Pipe Cutter - VAS 6056/2- .
- Clean the Oil Filler VAS 6262A-.

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#### 9.3 Transmission Fluid Level, Checking

- Pay attention to Refer to ⇒ "4 Repair Information", page 6.
- Pay attention to Refer to ⇒ "4.2 Guidelines for Clean Working Conditions", page 6
- Pay attention to the general information "Oil, Environmental and Disposal Regulations". Refer to ⇒ "4.3 General Repair Information", page 7

# Special tools and workshop equipment required

Refer to ⇒ "9.2 Tools for Transmission Fluid Change", page <u>106</u>

# **Procedure**



# CAUTION

Risk of injury due to the radiator fan turning on automatically.

Maintain distance to the fan when working near the radiator.

# **Test Conditions**

- Transmission not in emergency operation mode.
- Move the vehicle onto a four-column workshop hoist or over a work pit so it is completely level.
- Selector lever in "P".
- The parking brake button is pulled to activate the electro-mechanical parking brake.
- Suction hoses from an exhaust extracting system are connected.
- Engine running at idle.

The A/C system and the heater are off.

# Transmission Fluid Temperature, Reading

- The transmission fluid level changes with the transmission fluid temperature: too low of a transmission fluid temperature leads to overfilling, and too high of a transmission fluid temperature leads to underfilling.
- An incorrect transmission fluid filling impairs the transmission function.
- Before beginning work the oil temperature must be approximately 30 °C (86 °F).
- Connect the Vehicle Diagnostic Tester -arrow- and select Individual test.
- Dual clutch transmission 0GC
- 01 OBD-capable systems
- 02 Transmission electronics
- 02 Transmission electronic functions
- 02 Oil level, checking

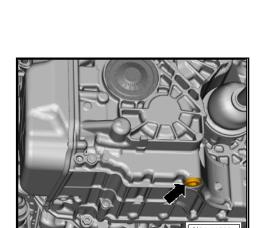
# Transmission Fluid Level, Checking

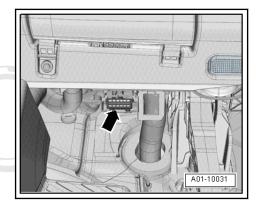
- Bring the transmission fluid temperature to approximately 30 °C (86 °F).
- The transmission has an inner fluid container, which must be ran dry before checking.
- Wait approximately 4 minutes until the internal fluid container has run dry. Protected by copyright. Copying for private or commercial purposes, in part or in whole, is not DI AG. AUDI AG does not guarantee or accept any liability
- Remove the one piece or front noise insulation Refer to document. Copyright by AUDI AG ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview -Noise Insulation .

# CAUTION

Risk of injury to the eyes and hands by escaping oil.

- Wear protective eyewear.
- Wear acid-resistant safety gloves.
- Place the Used Oil Collection and Extraction Unit -SMN372500- under the transmission.
- The engine is idling and the selector lever is in "P".
- Remove the check plug -arrow-.





- Auði
- The collected transmission fluid runs out of the overflow pipe -arrow 2-.
- Some gear oil always leaks out when opening the inspection plug -arrow 1-, regardless of the gear oil level.



There are different versions of the overflow pipe.

Transmission damage can result from over or under filling.

- Check which overflow pipe is installed.

Transmission with beige overflow pipe:



Transmission damage due to overfilling.

- The correct oil level lays under the level of the overflow pipe.
- For this reason the unscrew the overflow pipe two turns for checking and the correct adjustment of the oil level.
- Check the overflow pipe is seated correctly.
- Loosen the overflow pipe two turns.

# Transmission with red overflow pipe:

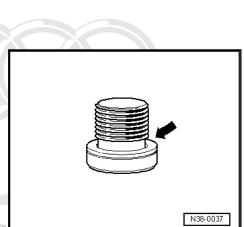
Removal to check the fluid level is not necessary.

# Continuation for all:

- If some transmission fluid still leaks out at a transmission fluid temperature between 35 and 45 °C (95 and 113 °F) (due to additional warming), the transmission fluid level is OK.
- Regardless of the gear oil level, a small wave of fluid comes out of the overflow tube every 30 seconds due to the multiplate clutch cooling oil pulse. This procedure is irrelevant for checking the transmission fluid level.
- · Leaked gear oil must not be reused.
- If necessary fill the transmission fluid. Refer to ⇒ page 112.
- If the transmission fluid level is OK, tighten the overflow pipe and then perform a measurement. Refer to <u>⇒ page 110</u>.

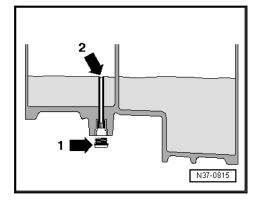
# **Final Procedures**

- Replace the check plug seal -arrow-.
- Remove the Oil Filler VAS 6262A- from the transmission.
- Tighten the overflow pipe.



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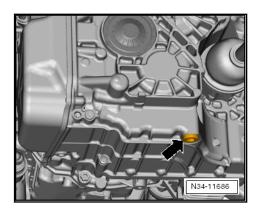




Tightening the check plug -arrow-.

# **Tightening Specifications**

- Refer to ⇒ "9.1 Overview Drain and Check Plugs", page
- Overview Noise Insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview - Noise Insulation.



# 9.4 Transmission Fluid, Draining and Filling

# **Procedure**

- Pay attention to Refer to ⇒ "4 Repair Information", page 6.
- Pay attention to Refer to ⇒ "4.2 Guidelines for Clean Working Conditions", page 6.
- Read the "Oil, Environmental and Disposal Regulations" general information. Refer to ⇒ "4.3 General Repair Informa-<u>tion", page 7</u> .

# Special tools and workshop equipment required

 Refer to ⇒ "9.2 Tools for Transmission Fluid Change", page <u> 106</u>

# CAUTION

Risk of injury due to the radiator fan turning on automatically.

Maintain distance to the fan when working near the radiator.

# **Test Conditions**

- Move the vehicle onto a four-column workshop hoist or over a work pit so it is completely level.
- Selector lever in "P".
- The parking brake button is pulled to activate the electro-mechanical parking brake.
- The engine is off.

# Transmission Fluid, Draining

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Remove the one piece or front noise insulation. Refer of One formation in this document. Convigate by AUDI AG. Body Exterior; Rep. Gr. 66; Noise Insulation; Overview -Noise Insulation .



# CAUTION

Risk of injury to the eyes and hands by escaping oil.

- Wear protective eyewear.
- Wear acid-resistant safety gloves.

- Place the Used Oil Collection and Extraction Unit -SMN372500- under the transmission.
- Remove the check plug -arrow-.
- The collected gear oil then runs out of the overflow tube.
- Remove the overflow pipe and let the transmission fluid drain.

# Note

- If a beige overflow pipe is installed it must be replaced with a red one. Refer to the ⇒ Electronic Parts Catalog (ETKA).
- Remove the Mechatronic oil drain plug -arrow-.
- Let the rest of the oil drain.

# Tip

- Wait approximately 4 minutes, until the entire oil has drained permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any lial
- Replace the Mechatronic oil drain plug and trighten. Copyright by AUDI AG.

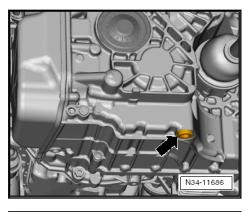
# Transmission Fluid, Filling

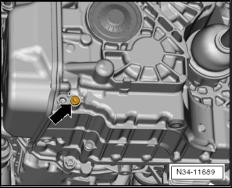
- Install the overflow pipe all the way.
- The overflow pipe must be easy to install.

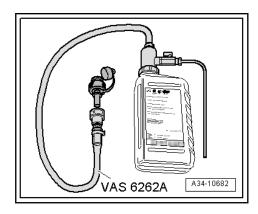


# Transmission damage due to incorrect filling.

- Do not fill the transmission fluid over the bleeder.
- Shake the container before opening.
- Install the container with the transmission fluid for the DSG transmission on the Oil Filler - VAS 6262 A-.
- If necessary, use the Oil Filler Adapter 6 VAS 6262/6-



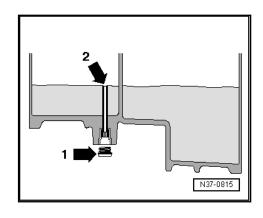




- Install the Adapter For Oil Filling VAS 6262 A- into the opening for the check plug hand-tight.
- Hold the container with the Oil Filler VAS 6262A- as high as possible over the DSG transmission and allow six liters of transmission fluid to flow into the DSG transmission.
- Start the engine and let it run in idle.
- Press the foot brake and shift through all selector lever positions "P, R, N, D/S" at idle, retaining each position for at least 3 seconds.
- Move the selector lever into "P" position.
- Do not turn off the engine.
- Then check the transmission fluid level and add if necessary. Refer to ⇒ "9.3 Transmission Fluid Level, Checking", page 108

# **Tightening Specifications**

- Refer to ⇒ "9.1 Overview Drain and Check Plugs", page
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# 35 – Gears, Shafts

# 1 Gears and Shafts, Disassembling and Assembling

Gear and shaft disassembly and assembly is not possible at this time.



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# Final Drive, Differential 39 –

#### Seals 1

- ⇒ "1.1 Component Location Overview Seals", page 115
- ⇒ "1.2 Left Seal, Replacing", page 115
- ⇒ "1.3 Right Seal, Replacing", page 118

#### 1.1 **Component Location Overview - Seals**

# 1 - Right Seal

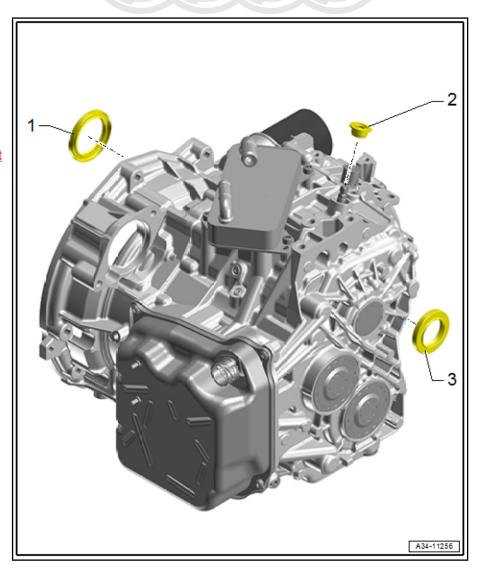
□ Replacing. Refer to ⇒ <u>1.3 Right Seal, Re-</u> placing", page 118

# 2 - Seal

- ☐ For the parking lock shaft
- □ Replacing. Refer to ⇒ "2.9 Parking Lock Shaft Seal, Replacing", page <u>49</u>

# 3 - Left Seal

□ Replacing. Refer to ⇒ 1.2 Left Seal, Replacing", page 115



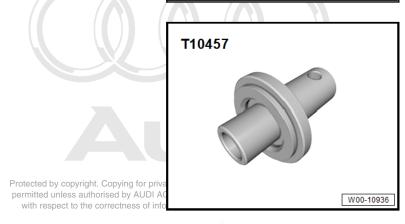
#### 1.2 Left Seal, Replacing

Special tools and workshop equipment required

Puller - Unit Injector - T10055-

T10055 W00-11199

Thrust Piece - T10457-



◆ Used Oil Collection and Extraction Unit - SMN372500-



- Commercially available drill
- Commercially available metal drill bit, 2 to 4 mm diameter

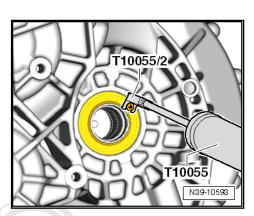
# Removing

- The transmission is installed.
- Remove the left drive axle. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle, Removing and Installing .
- Grease the drill bit -3- so that the shavings stick to it.



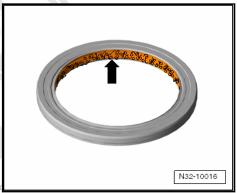
Risk of damaging the bearing when drilling.

- Only drill through the metal ring of the shaft seal.
- Do not install the screw too deep.
- Seal the opening on the transmission for the drive axle with a clean cloth -2-.
- Carefully drill a 2 to 4 mm hole into the outer metal ring -1- of the seal.
- Place the Used Oil Collection and Extraction Unit -SMN372500- under the transmission.
- Install a bolt (approximately 4 mm diameter) into the drilled out hole on the seal.
- Remove the seal using the Puller Unit Injector T10055and the Adapter - T10055/2-.
- Carefully remove the cloth. Make sure that no shavings get into the transmission when doing so.
- Carefully clean the transmission and the opening for the drive axle.



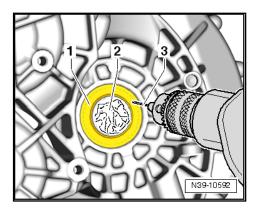
# Installing

- Coat the outer edge and sealing lips on the new seal with transmission fluid.
- Installation position: open side of the seal faces the transmission.
- Immediately mount the seal by hand and push it in as far as possible so that it is secure in the transmission housing.

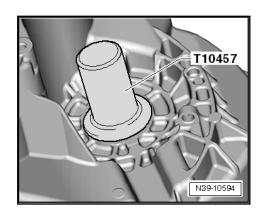


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- Drive the seal in all the way using the Thrust Piece -T10457- and do not tilt the seal while doing so.
- Install the left drive axle. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle, Removing and Installing .
- Check the transmission fluid level land fill. Refer to ≥ "9.3 Transmission Fluid Level, Checking", page 108.



## 1.3 Right Seal, Replacing

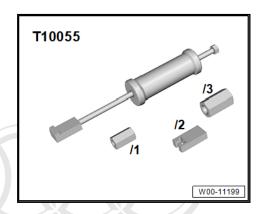
⇒ "1.3.1 Right Seal, Replacing, FWD Vehicles", page 118

⇒ "1.3.2 Right Seal, Replacing, AWD Vehicles", page 120

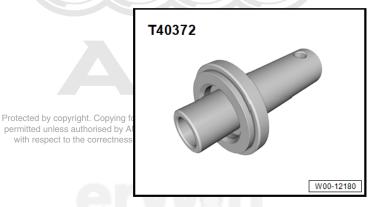
## 1.3.1 Right Seal, Replacing, FWD Vehicles

Special tools and workshop equipment required

◆ Puller - Unit Injector - T10055-



Thrust Piece - T40372-, not illustrated



Used Oil Collection and Extraction Unit - SMN372500-



◆ Commercially available drill

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♦ Commercially available metal drill bit, 2 to 4 mm diameter correctness of information in this document. Copyright by AUDI AG.

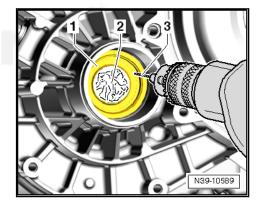
# Removing

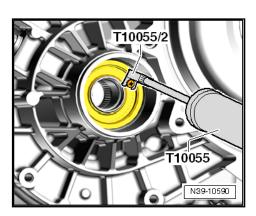
- The transmission is installed.
- Remove the right drive axle. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle, Removing and Installing .
- Grease the drill bit -3- so that the shavings stick to it.



Risk of damaging the bearing when drilling.

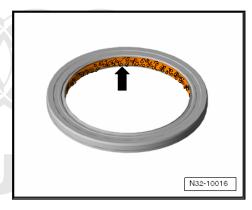
- Only drill through the metal ring of the shaft seal.
- Do not install the screw too deep.
- Seal the opening on the transmission for the drive axle with a clean cloth -2-.
- Carefully drill a 2 to 4 mm hole into the outer metal ring -1- of the seal.
- Place the Used Oil Collection and Extraction Unit -SMN372500- under the transmission.
- Install a bolt (approximately 4 mm diameter) into the drilled out hole on the seal.
- Remove the seal using the Puller Unit Injector T10055and the Adapter - T10055/2- .
- Carefully remove the cloth. Make sure that no shavings get into the transmission when doing so.
- Carefully clean the transmission and the opening for the drive axle.



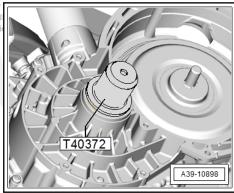


# Installing

- Coat the outer edge and sealing lips on the new seal with transmission fluid.
- Installation position: open side of the seal faces the transmission.
- Immediately mount the seal by hand and push it in as far as possible so that it is secure in the transmission housing.



- Drive in the seal all the way using the Thrust Piece Copying for private o T40372-; do not tilt the seal while doing to unless authorised by AUDI AG. Al
- Install the right drive axle. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle, Removing and Installing .
- Check the transmission fluid level land fill. Refer to ⇒ "9.3 Transmission Fluid Level, Checking", page 108.



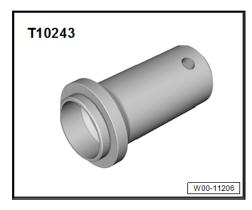
#### 1.3.2 Right Seal, Replacing, AWD Vehicles

# Special tools and workshop equipment required

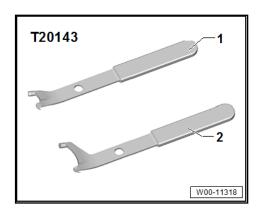
◆ Used Oil Collection and Extraction Unit - SMN372500-



Seal Installer - Bevel Box - T10243-



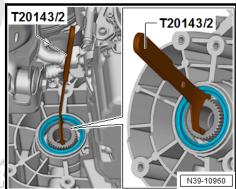
Puller - Crankshaft/Power Steering Seal - T20143-



♦ Sealing Grease - G 052 128 A1-

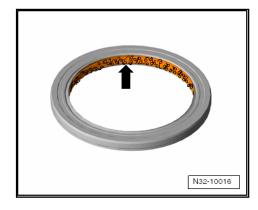
# **Procedure**

- Remove the bevel box. Refer to ⇒ "4.2 Bevel Box, Removing", page 86
- Place the Used Oil Collection and Extraction Unit -SMN372500- under the transmission.
- Pry out the seal on the DSG transmission using the Puller -Crankshaft/Power Steering Seal - T20143/1- or - T20143/2- .



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- Coat the outer circumference of the new seal with transmission fluid.
- Fill the space between the sealing/dust lip -arrow- halfway with Sealing Grease - G 052 128 A1-.
- Carefully install the sealing ring all the way using the Seal Installer - Bevel Box - T10243- .
- The seal is driven all the way approximately 6 mm from the edge of the transmission housing.
- Install the bevel box. Refer to ⇒ "4.3 Bevel Box, Installing", page 90 .



#### 2 **Differential**

- ⇒ "2.1 Right Flange Shaft, Removing and Installing", page 122
- 2.1 Right Flange Shaft, Removing and Installing
- ⇒ "2.1.1 Right Flange Shaft, Removing and Installing, Vehicles with AWD", page 122
- 2.1.1 Right Flange Shaft, Removing and Installing, Vehicles with AWD

Special tools and workshop equipment required

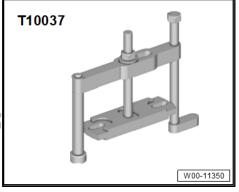
♦ Used Oil Collection and Extraction Unit - SMN372500-



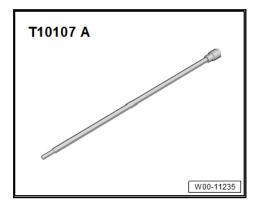
Puller - Flanged Shaft - T10037-



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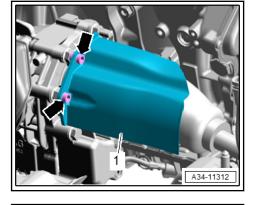
Socket and Extended Bit - T10107A-



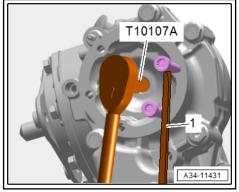
# Removing

The transmission is installed.

- Remove the nuts -arrows- and remove the right drive axle heat shield.
- Remove the right drive axle. Refer to ⇒ Suspension, Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle, Removing and Installing .
- Place the Used Oil Collection and Extraction Unit -SMN372500- under the transmission.



Remove the flange shaft bolt using the Socket and Extended Bit - T10107A- by installing two bolts in the flange and counterholding the flange shaft with an assembly lever -1-.



- Fasten the Puller Flanged Shaft T10037- to the right flange shaft as shown.
- Align the Puller Flanged Shaft with the Knurled Nut -T10037/1- and the spindle -A- so that it is parallel to the flange.
- Remove the flange shaft.

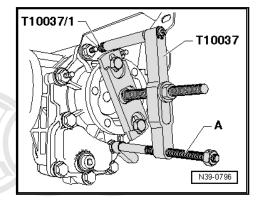
# Installing

Install in the reverse order of removal while noting the following:

- Carefully install the flange shaft while rotating it at the same time.
- Tighten the flange shaft.
- Gear Oil, Checking Level. Refer to  $\Rightarrow$  "3.1 Gear Oil, Checking Level", page 124.

# **Tightening Specifications**

- ◆ Flange shaft bolt: ⇒ Item 1 (page 86)
- Overview drive axle. Refer to  $\Rightarrow$  Suspension by Wheels do by AUDI AG. AUDI AG does not guarantee or accept any liability Steering; Rep. Gr. 40; Drive Axle; Overview Drive Axle so f information in this document. Copyright by AUDI AG.



#### 3 Gear Oil

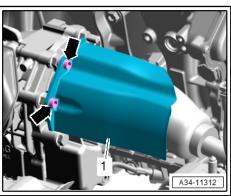
- ⇒ "3.1 Gear Oil, Checking Level", page 124
- ⇒ "3.2 Gear Oil, Draining and Filling", page 124

#### 3.1 Gear Oil, Checking Level

- The bevel box is attached to the side of the transmission and has it own oil system.
- Refer to the ⇒ Electronic Parts Catalog (ETKA) for the gear oil specification.

# **Procedure**

- Replace the fluid filler hole plug after removal.
- Move the vehicle onto a four-column workshop hoist or over a work pit so it is completely level.
- The engine is off.
- Remove the one piece or front noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview -Noise Insulation .
- If necessary, remove the nuts -arrows- and remove the right drive axle heat shield.



- Remove the oil filler hole plug -1-.
- Specified value: gear oil level up to lower edge of the oil filler hole.
- Add gear oil if necessary. Refer to ⇒ "3.2 Gear Oil, Draining and Filling", page 124. Protected by copyright. Copying for
- Install the drive axle heat shield. Refer to ⇒DeSuspension, horised by AUI Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle Heat Shield, Removing and Installing.

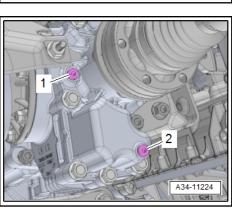
# **Tightening Specifications**

- Oil filler hole plug. Refer to ⇒ Fig. ""Tightening Specifications"", page 128
- Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview - Noise Insulation .

#### 3.2 Gear Oil, Draining and Filling

- The gear oil in the bevel box must only be drained for a repair. Changing the oil is not intended.
- Refer to the ⇒ Electronic Parts Catalog (ETKA) for the gear oil specification.

# Special tools and workshop equipment required



If necessary, Oil Filler - Adapter 6 - VAS 6262/6- or Oil Filler - Adapter - VAS 6262/7-



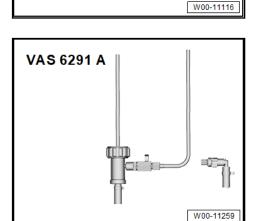
◆ Charging Device for AWD Clutch Coupling 2 - VAS 6291A-



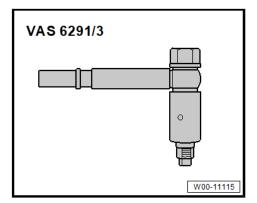
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Charging Device For AWD Clutch Coupling 2 - Adapter 3 -VAS 6291/3-



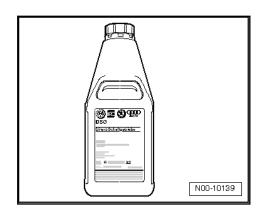
VAS 6262/6



♦ Used Oil Collection and Extraction Unit - SMN372500-



Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct original transmission fluid container, gear oil; part number.



- Protective Eyewear
- Acid-Resistant Safety Gloves

# Draining

- Replace the oil drain plug and fluid filler hole plug after removal.
- Move the vehicle onto a four-column workshop hoist or over a work pit so it is completely level.
- The engine is off.
- Remove the one piece or front noise insulation. Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview -Noise Insulation .
- Place the Used Oil Collection and Extraction Unit -SMN372500- under the transmission.

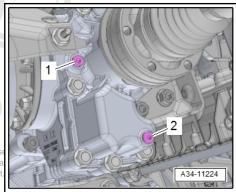
# CAUTION

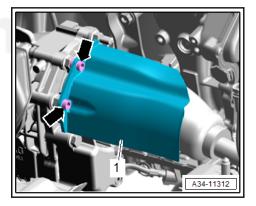
Risk of injury to the eyes and hands by escaping oil.

- Wear protective eyewear.
- Wear acid-resistant safety gloves.
- Remove the oil drain plug 2-1 and drain the gear oil or commercial purpo
- unless authorised by AUDI AG. AUDI AG does not gu Tighten the new oil drain plug spect to the correctness of information in this docume

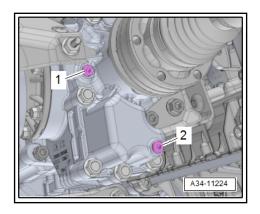
# **Filling**

- If necessary, remove the nuts -1- and remove the right drive axle heat shield.
- Route the hose for the Charging Device for AWD Clutch Coupling 2 - VAS 6291A- through the engine/motor compartment.

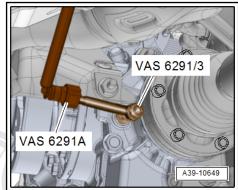




Remove the oil filler hole plug -1-.

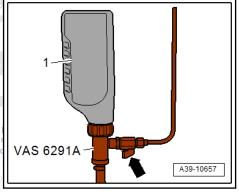


- Install the Charging Device for Charging Device For AWD Clutch Coupling 2 Adapter 3 VAS 6291/3- all the way.
- Engage the elbow on the Charging Device for AWD Clutch Coupling 2 - VAS 6291A- with the Charging Device For AWD Clutch Coupling 2 - Adapter 3 - VAS 6291/3-
- The hose must not sag.



- Pay attention to that the valve -arrow- is closed.
- Attach the fluid container -1- to the Charging Device for AWD Clutch Coupling 2 - VAS 6291A-.
- The Oil Filler Adapter 6 VAS 6262/6- must also be used on some fluid containers.
- Open the valve -arrow- and hold up the fluid container as shown.

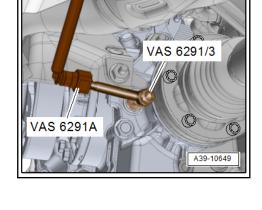
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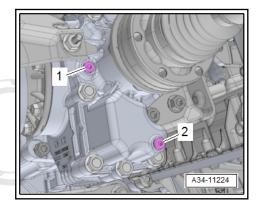


- The bevel box is now filled.
- When the bevel box is filled correctly, fluid comes out at the Charging Device For AWD Clutch Coupling 2 - Adapter 3 -VAS 6291/3- .
- If the gear oil leaks out at the Charging Device For AWD Coupling 2 Adapter 3 VAS 6291/3- , hold the oil container in such a way so that any excess oil flows back into the
- When the fluid stops flowing back, remove the Charging Device for AWD Clutch Coupling 2 - VAS 6291A-.
- Install the »old« oil filler plug and lightly tighten it.
- Start the engine, engage a gear and let the transmission turn for approximately two minutes.
- Switch off the engine and remove the oil filler hole plug.
- Check the oil level and fill again with oil up to the lower edge of the filler hole.
- Tighten the new fluid filler plug.
- Carefully remove leaking oil from the bevel box.
- Install the drive axle heat shield. Refer to ⇒ Suspension. Wheels, Steering; Rep. Gr. 40; Drive Axle; Drive Axle Heat Shield, Removing and Installing.

# **Tightening Specifications**

- 1 Oil filler hole plug
  - Replace after removing
  - 15 Nm
- 2 Fluid Drain Plug
  - Replace after removing
- Refer to ⇒ Body Exterior; Rep. Gr. 66; Noise Insulation; Overview - Noise Insulation .







#### 4 **Bevel Box Components**

- ⇒ "4.1 Overview Bevel Box Components", page 129
- ⇒ "4.2 Bevel Box Seals, Replacing", page 135
- ⇒ "4.3 Right Seal, Replacing", page 135
- ⇒ "4.4 Left Seal, Replacing", page 137
- ⇒ "4.5 Right Flange Shaft Needle Bearing, Replacing", page
- ⇒ "4.6 Output Flange, Removing and Installing", page 140

#### 4.1 Overview - Bevel Box Components

- ⇒ "4.1.1 Overview Bevel Box Components, 0CN", page 129
- ⇒ "4.1.2 Overview Bevel Box Components, 0FN", page 131
- ⇒ "4.1.3 Overview Bevel Box Components, 0AV and 0FV", page 133

# 4.1.1 Overview - Bevel Box Components,

Characteristics of the bevel box. Refer to ⇒ "1.2 Bevel Box Identification", page 2.



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- Between the bevel box and the transmission
- Replacing. Refer to ⇒ "4.4 Left Seal, Replacing", page 137.

# 2 - Bevel Box

- Removing. Refer to ⇒ "4.2 Bevel Box, Removing", page 86.
- ☐ Installing. Refer to ⇒

  "4.3 Bevel Box, Installing", page 90.

# 3 - Fluid Drain Plug

- With permanent seal
- Replace after removing
- □ 20 Nm

# 4 - Fluid Filler Plug

- With permanent seal
- Replace after removing
- □ 20 Nm

# 5 - Seal

- ☐ For the right flange shaft
- □ Replacing. Refer to ⇒ <u>"4.3 Right Seal, Re-placing", page 135</u>.

# 6 - Bleed Pipe

- ☐ For bleeding the bevel box
- Press it in all the way

# 7 - Cap

□ For bleeding the bevel box

# 8 - Right Flange Shaft

Removing and Installing. Refer to ⇒ "2.1.1 Right Flange Shaft, Removing and Installing, Vehicles with AWD", page 122.

# 9 - Seal

- ☐ Insert into the surrounding right flange shaft groove
- ☐ Remove to replace the needle bearing (polygon bearing) -item 10-.

# 10 - Needle Bearing (Polygon Bearing)

□ Replacing. Refer to ⇒ "4.5 Right Flange Shaft Needle Bearing, Replacing", page 138.

# 11 - Circlip

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Replace after removing

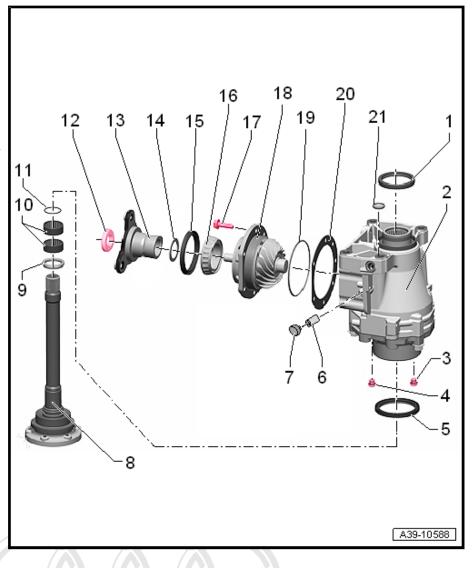
# 12 - Twelve-Point Nut

- □ Replace after removing
- Secure the new nut by peening. Refer to ⇒ page 149.
- □ 340 ±15 Nm

# 13 - Output Flange

# 14 - Shim

□ No replacement part



# 15 - Seal

- □ For bevel box output flange
- □ Replacing. Refer to ⇒ "4.6 Output Flange, Removing and Installing", page 140.

# 16 - Tapered Bearing Inner Race

No replacement part

# 17 - Bolt

□ 38 Nm

# 18 - Pinion Housing

- ☐ With shaft bevel gear and outer race for tapered roller bearing
- □ No replacement part
- ☐ Carefully pry out, alternating from side to side
- □ Note the fastening holes; the pinion housing fits only in one position

# 19 - O-Ring

- ☐ To replace, remove the bolts -item 17- and carefully pry out the pinion housing at the notches in the pinion housing.
- Do not remove the twelve-point nut -item 12- and the output flange -item 13-.

# 20 - Shim

- No replacement part
- □ Note the bevel box fastening holes; the shim only fits in one position

# 21 - Cap

□ No replacement part

# 4.1.2 Overview - Bevel Box Components,

Characteristics of the bevel box. Refer to ⇒ "1.2 Bevel Box Identification", page 2.



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□ Replace

# 2 - Washer

Replace

# 3 - Output Flange

 Removing and Installing. Refer to ⇒
 "4.6.2 Output Flange, Removing and Installing, 0FNP repage 149 right.

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# 4 - Seal

□ Replacing. Refer to ⇒ "4.6.2 Output Flange, Removing and Installing, 0FN", page 149.

# 5 - O-Ring

□ Replacing. Refer to ⇒
"4.6.2 Output Flange,
Removing and Installing, 0FN", page 149.

# 6 - Housing Cover

# 7 - O-Ring

□ Replace

# 8 - Bearings

□ No replacement part

# 9 - Shim

□ No replacement part

# 10 - Pinion

■ No replacement part

# 11 - Shim

□ No replacement part

# 12 - Bearings

□ No replacement part

# 13 - Seal

□ Replacing. Refer to ⇒ "4.4 Left Seal, Replacing", page 137.

# 14 - Cap

# 15 - Bevel Box

- □ Removing. Refer to ⇒ "4.2 Bevel Box, Removing", page 86.
- ☐ Installing. Refer to ⇒ "4.3 Bevel Box, Installing", page 90.

# 16 - Bleeder

# 17 - Bleeder Cap

# 18 - Seal

□ Replacing. Refer to ⇒ "4.3 Right Seal, Replacing", page 135.

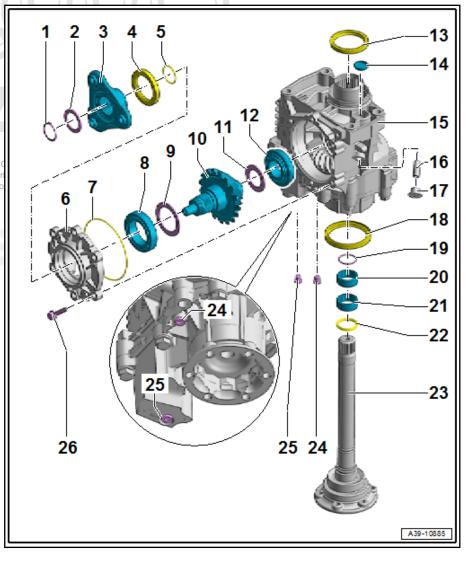
# 19 - Circlip

# 20 - Needle Bearing

□ Replacing. Refer to ⇒ "4.5 Right Flange Shaft Needle Bearing, Replacing", page 138.

# 21 - Needle Bearing

 $\square$  Replacing. Refer to  $\Rightarrow$  "4.5 Right Flange Shaft Needle Bearing, Replacing", page 138.



- 22 O-Ring
- 23 Flange Shaft
  - □ Removing and Installing. Refer to ⇒ "2.1.1 Right Flange Shaft, Removing and Installing, Vehicles with AWD", page 122.
- 24 Fluid Filler Plug
  - □ 20 Nm
- 25 Fluid Drain Plug
  - □ 20 Nm
- 26 Bolt
  - □ 38 Nm
  - ☐ tighten in a diagonal sequence

# 4.1.3 Overview - Bevel Box Components, 0AV and 0FV

Characteristics of the bevel box. Refer to ⇒ "1.2 Bevel Box Identification", page 2.



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7-Speed Dual Clutch Transmission 0GC - Edition 10.2023



□ Replacing. Refer to ⇒ 4.4 Left Seal, Replacing", page 137

# 2 - Bevel Box

□ Removing and Installing. Refer to ⇒ "4 Bevel Box", page 86.

# 3 - Fluid Drain Plug

- □ 15 Nm
- □ Always replace.
- With permanent seal

# 4 - Right Seal

□ Replacing. Refer to ⇒ "4.3 Right Seal, Replacing", page 135.

# 5 - Fluid Filler Plug

- □ 15 Nm
- □ Always replace.
- With permanent seal

# 6 - Bleed Pipe

- For bleeding the bevel
- The component is not a replacement part

# 7 - Cap

□ For bleeding the bevel box

# 8 - Right Flange Shaft

□ Removing and Installing. Refer to ⇒

2.1.1 Right Flange Shaft, Removing and Installing, Vehicles with AWD", page 122.

# 9 - Seal

- □ Replace
- ☐ Insert into the surrounding right flange shaft groove
- ☐ To replace, remove the needle bearing (polygon bearing)

# 10 - Needle Bearing (Polygon Bearing) for private or commercial purposes, in part or in whole, is not

- ☐ If it is difficult to move when the flange shaft is removed, this is not an indication of a malfunction.
- Acoustic test only when installed
- ☐ Check for damage, for example for cracks on the bearing outer race
- □ Replacing. Refer to ⇒ "4.5 Right Flange Shaft Needle Bearing, Replacing", page 138.

# 11 - Circlip

□ Replace

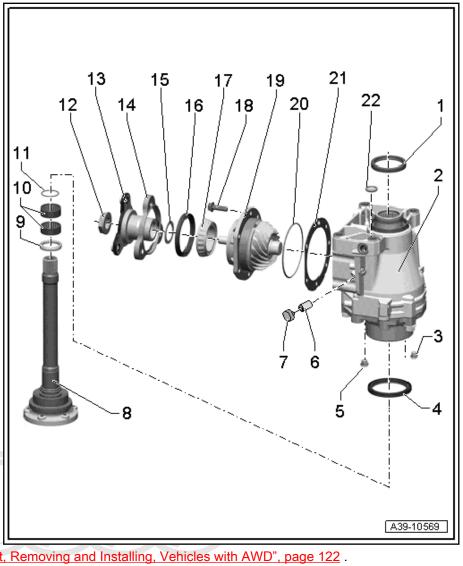
# 12 - Nut

- □ 480 Nm
- ☐ Install with Locking Fluid D 000 600- .
- □ Replace

# 13 - Bevel Box Output Flange

# 14 - Output Flange Cap

Locked with the output flange



	□ Replace if damaged
	15 - Shim
	☐ The component is not a replacement part
	16 - Output Flange Seal
	$\square$ Replacing. Refer to $\Rightarrow$ "4.6.3 Output Flange, Removing and Installing, 0AV and 0FV", page 154.
	17 - Tapered Bearing Inner Race
	☐ The component is not a replacement part
	18 - Bolt
	□ 25 Nm
	Some bolts are double bolts for securing the right drive axle heat shield
	19 - Pinion Housing
	☐ With shaft bevel gear and outer race for tapered roller bearing
	□ Components are not replacement parts
	☐ Carefully pry out from side to side
	□ Note the fastening holes; the pinion housing fits only in one position
	20 - O-Ring
	□ To replace, remove the bolts ⇒ Item 18 (page 135) and carefully pry the pinion housing out at the tabs protruding all the way around.
	21 - Shim
	ected CopThe component is not a replacement part whole, is not
ern	mitted mes Note the bevel 6 ox fastening holes the shim only fits in one position with respect to the correctness of information in this document. Copyright by AUDI AG.
	22 - Cap
	☐ Drive in all the way with the Holding Fixture - Spacers - VW 540/1 B
	4.2 Bevel Box Seals, Replacing
	⇒ "4.3 Right Seal, Replacing", page 135
	⇒ 4.5 Right Seal, Replacing, page 135

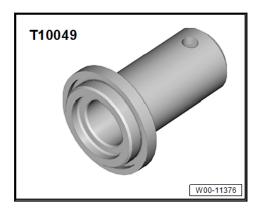
- ⇒ "4.4 Left Seal, Replacing", page 137
- ⇒ "4.5 Right Flange Shaft Needle Bearing, Replacing", page 138

## 4.3 Right Seal, Replacing

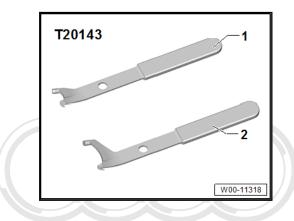
- Pay attention to the general information. Refer to ⇒ "4 Repair Information", page 6.
- ♦ Follow the guidelines for clean working conditions. Refer to ⇒ "4.2 Guidelines for Clean Working Conditions", page 6.
- ◆ Pay attention to the general repair information. Refer to ≥ 4.3 General Repair Information", page 7

Special tools and workshop equipment required

Seal Installer - Flange Shaft - T10049-



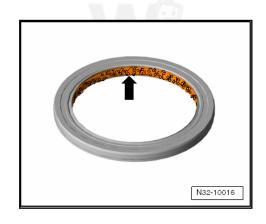
Puller - Crankshaft/Power Steering Seal - T20143-



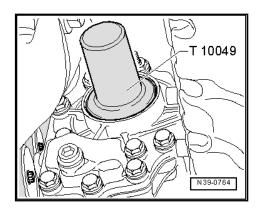
Sealing Grease. Refer to the ⇒ Electronic Parts Catalog (ETKA).

# **Procedure**

- The transmission is installed.
- Remove the right flange shaft. Refer to ⇒ "2.1.1 Right Flange Shaft, Removing and Installing, Vehicles with AW<sub>1</sub>D"<sub>exted</sub> by copyright. Copying for private or commercial purposes, in part or in whole, is not page 122. with respect to the correctness of information in this document. Copyright by AUDI AG.
- Remove the right seal using the Puller Crankshaft/Power Steering Seal - T20143/2- .
- Coat the outer edge and sealing lips on the new seal with transmission fluid.
- Fill the space between the sealing/dust lip -arrow- halfway with sealing grease. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct sealing grease.



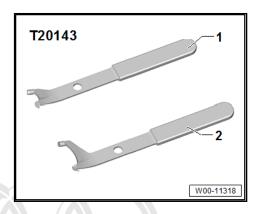
- Drive the new seal all the way in using the Seal Installer -Bevel Box - T10049- . Do not tilt it while doing so.
- Install the right flange shaft. Refer to ⇒ "2.1.1 Right Flange Shaft, Removing and Installing, Vehicles with AWD", page
- Gear Oil, Checking Level. Refer to ⇒ "3.1 Gear Oil, Checking Level", page 124



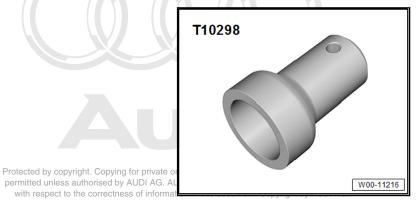
#### 4.4 Left Seal, Replacing

# Special tools and workshop equipment required

◆ Puller - Crankshaft/Power Steering Seal - T20143-



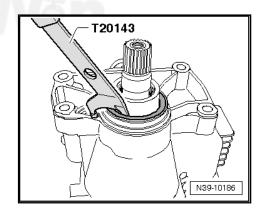
♦ Seal Installer - Bevel Box - T10298-



Sealing Grease. Refer to the ⇒ Electronic Parts Catalog (ETKA).

# **Procedure**

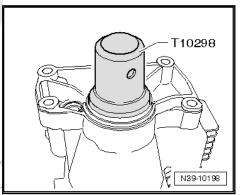
- Remove the bevel box. Refer to ⇒ "4.2 Bevel Box, Remov-
- Pry out the seal on the bevel box using the Puller Crankshaft/Power Steering Seal - T20143/1- or -T20143/2- .



- Coat the outer edge and sealing lips on the new seal with transmission fluid.
- Fill the space between the sealing/dust lip -arrow- halfway with sealing grease. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct sealing grease.
- N32-10016
- Drive the new seal all the way in using the Seal Installer Bevel Box T10298- . Do not tilt it while doing so.
- Install the bevel box. Refer to ⇒ "4.3 Bevel Box, Installing", page 90 .

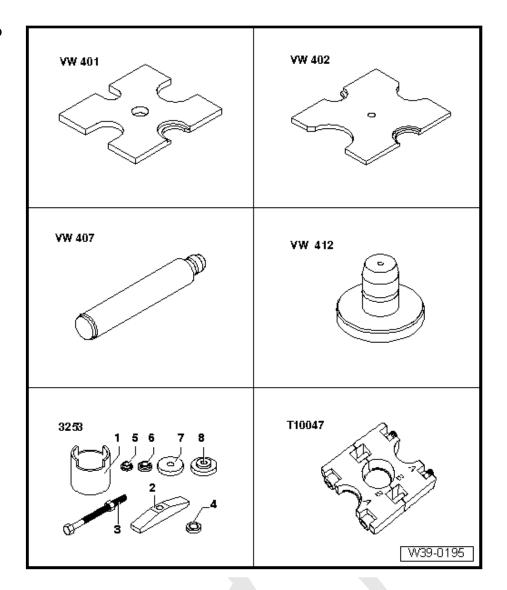


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## Right Flange Shaft Needle Bearing, Replacing 4.5

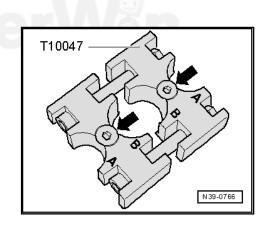
# Special tools and workshop equipment required



- ♦ Press Plate VW 401-
- ♦ Press Plate VW 402-
- ◆ Press Piece Rod VW 407-
- ♦ Press Piece Multiple Use VW 412-
- ♦ Bearing Installer Rear Wheel Bearing Kit VAS 3253-
- ♦ Bearing Installer Needle Bearing T10047-

# **Procedure**

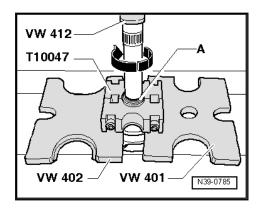
- Remove the right flange shaft. Refer to ⇒ "2.1.1 Right Flange Shaft, Removing and Installing, Vehicles with AWD", page 122
- Mount the Bearing Installer Needle Bearing T10047- as shown.
- The markings "B" on both parts face each other
- The depressions -arrows- must be under the bearing.
- Bolt the parts together all the way.



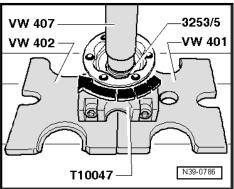
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- Αυδι
- Remove the circlip -A-.
- The shaft must be rotated when pressing off -arrow- so that the needle bearing contact surface on the shaft does not get damaged.



- The shaft must be rotated when pressing on -arrow- so that the needle bearing contact surface on the shaft does not get damaged.
- Secure the needle bearing with a new circlip.
- Install the right flange shaft. Refer to ⇒ "2.1.1 Right Flange" Shaft, Removing and Installing, Vehicles with AWD", page <u> 122</u> .



# 4.6 Output Flange, Removing and Installing

"4.6.1 Output Flange, Removing and Installing, 0CN", page

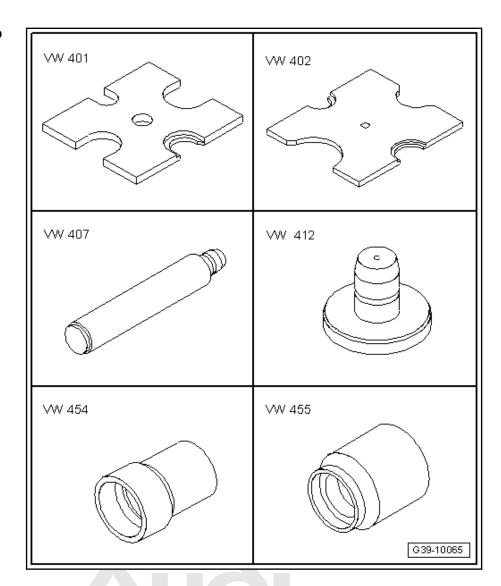
⇒ "4.6.2 Output Flange, Removing and Installing, 0FN", page

⇒ "4.6.3 Output Flange, Removing and Installing, 0AV; and copyright. Copyright Copyright or commercial purposes, in part or in whole, is not permitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability permitted unless authorised by AUDI AG. with respect to the correctness of information in this document. Copyright by AUDI AG.

# Output Flange, Removing and Instal-4.6.1 ling, 0CN

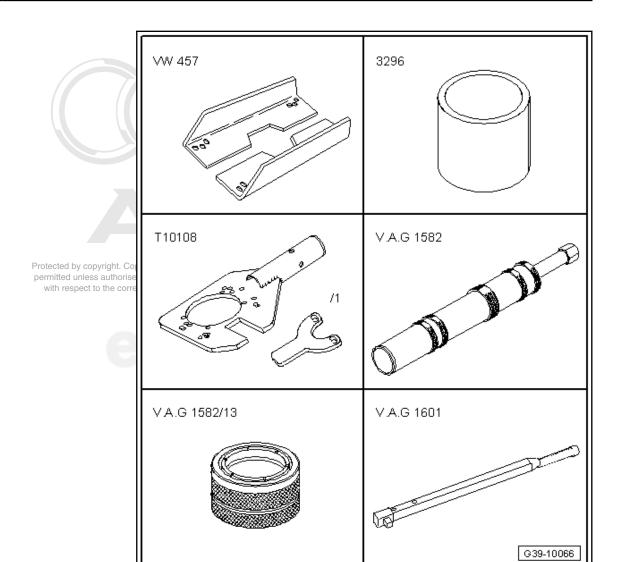
Characteristics of the bevel box. Refer to ⇒ "1.2 Bevel Box Identification", page 2.

# Special tools and workshop equipment required

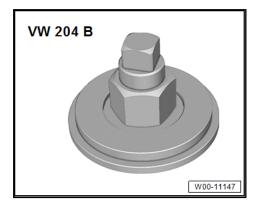


- ♦ Press Plate VW 401-
- Press Plate VW 402-
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  Press Piece Rod VW 407emitted unless authorised by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- Press Piece Multiple Use VW 412-
- Press Piece Multiple Use VW 454-
- ♦ Press Piece Multiple Use VW 455-



- Support Channels VW 457-
- Press Piece Reverse Gear Syncro 3296-
- Gearbox Support T10108- with Gearbox Support Stop Plate T10108/1-
- Puller Taper Roller Bearing V.A.G 1582-
- Puller Taper Roller Bearing Adapter 13 V.A.G 1582/13-
- Torque Wrench 1601 V.A.G 1601-
- Seal Installer Crankshaft VW 204 B-



Dial Indicator Holder - VW 387-



♦ Press Piece - Multiple Use - 40 - 105-



♦ Socket AF 34 mm - T50019-

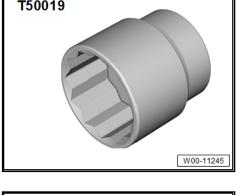


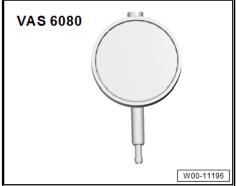
40-105

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♦ Dial Indicator - VAS 6080A-





- Sealing Grease. Refer to the ⇒ Electronic Parts Catalog (ETKA).
- ♦ M10 x 30 bolt (quantity: 2)
- M8 x 25 bolt (quantity: 1)
- M12 x 10 nut (quantity: 4)

#### **Procedure**

- A tapered roller bearing inner race is pressed onto the bevel box output flange.
- This is removed later in the procedure.
- Do not replace the tapered roller bearing for the bevel box output flange and the shims.
- Remove the bevel box. Refer to ⇒ "4.2 Bevel Box, Removing", page 86
- Place the bevel box on the hole -arrow- marked with the number "4" in the Gearbox Support - T10108- . Place the M12 x 10 nut -item A- between the bevel box and the transmission holder to do so.
- Align the bevel box with the remaining three holes and secure it with the nuts -A- inserted between.
- Drain the gear oil from the bevel box. Refer to ⇒ "3.2 Gear Oil, Draining and Filling", page 124.



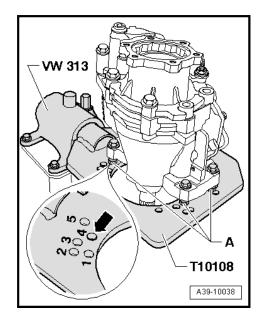
Turn the points -arrows- on the twelve-point nut -A- back into the recesses on the output flange -B-.

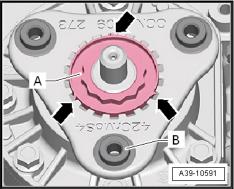


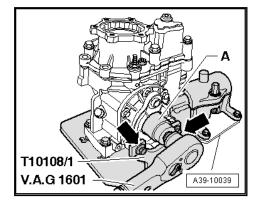
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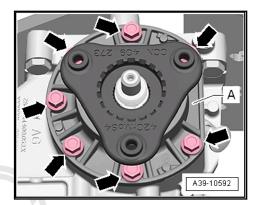
- Lock the bevel box output flange using the Gearbox Support - Stop Plate - T10108/1- by installing the two M10 x 30 bolts -arrows-.
- A Socket AF 34 mm T50019-
- Remove the output flange nut.







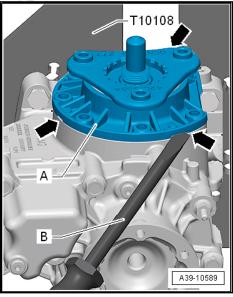
- Pivot the bevel box so that the output flange faces upward.
- Remove the bolts -arrows- for the pinion housing -A-.



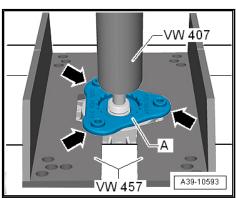
Position a suitable flat-head screwdriver -B- into the three recesses -arrows- on the pinion housing -A- and carefully pry out the pinion housing together with the shaft bevel gear.



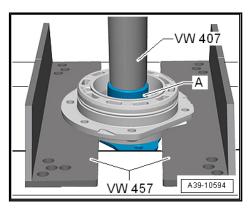
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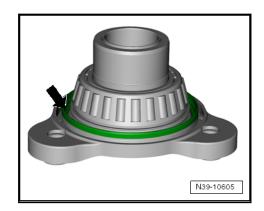
- Place the output flange -A- evenly onto the Support Channels - VW 457- -arrows-.
- Remove the shaft bevel gear from the output flange -A-.
- Secure the shaft bevel gear and tapered bearing inner race from falling.



Remove the output flange -A- from the pinion housing.



The seal -arrow- is located on the output flange.



V.A.G 1582

V.A.G 1582/13

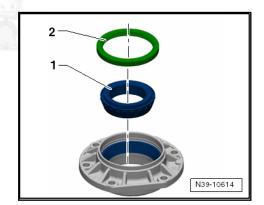
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The tapered bearing inner race must be removed from the output flange to remove the seal.

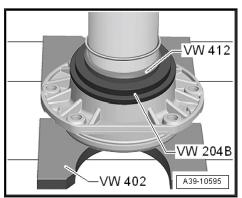


Risk of damaging the tapered bearing inner race.

- Remove the tapered bearing inner race using the Puller -Taper Roller Bearing - Adapter 13 - V.A.G 1582/13- .
- Replace the bevel box if the tapered bearing inner race is damaged.
- Place the Press Piece Multiple Use 40-105- on the output
- Remove the tapered bearing inner trace from the output to or commercial purposes, in part or in whole, is not flange using the Tapered Roller Bearing Puller by AUDI AG. AUDI AG does not guarantee or accept any liability with respect to the correctness of information in this document. Copyright by AUDI AG.
- Remove the output flange seal.
- Insert the old tapered bearing inner race -1- into the pinion housing.
- Lightly lubricate the outer diameter of the new output flange seal -2-.



- Install the seal so that it is flush.
- The larger diameter of the Seal Installer Crankshaft VW 204 B- points to the seal.
- Fill the space between the sealing/dust lip halfway with sealing grease. Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct sealing grease.

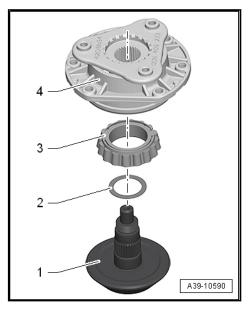


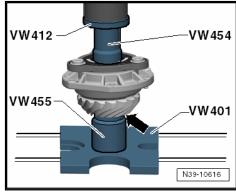
- Install the tapered bearing inner race (refer to ⇒ page 146) all the way onto the output flange.
- The larger diameter of the Press Piece Multiple Use VW 454- points to the output flange.
- Install the tapered bearing inner race until it stops. Do not apply any greater pressure to the tapered roller bearing.
- VW 412 3296 VW 402 A39-10596
- Place the shim -2-, the tapered bearing inner race -3- and the pinion housing -4- onto the shaft bevel gear -1-.
- Re-install the old shim -2-. This ensures the bearing pre-load of the shaft bevel gear in the pinion housing.



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- Carefully press the pinion housing with the output flange all the way onto the shaft bevel gear.
- The shoulder -arrow- of the Press Piece Multiple Use VW 455- points to the shaft bevel gear.
- Turn the pinion housing during pressing procedure.

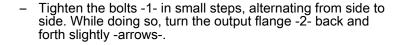


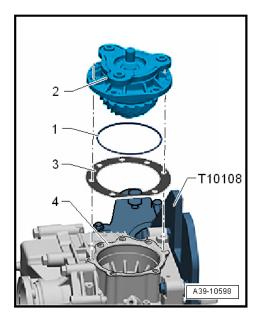


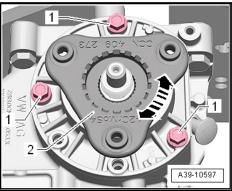
- Align the old shim -3- to the pinion housing -2-.
- The pinion housing -2- and shim -3- only fit in one position.
- Coat the new O-ring -1- with gear oil and slide it onto the pinion housing -2-.
- Insert the pinion housing -2- into the axle drive housing -4-.

#### Note:

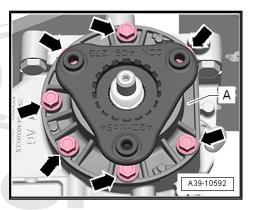
- The splines on the shaft and head bevel gear must come in contact.
- Align the openings for the pinion housing bolts to the axle drive housing.





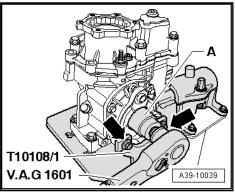


Tighten the bolts -arrows- for the pinion housing -A- in a diagonal sequence.

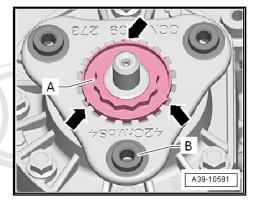


- Tighten the new output flange twelve-point nut.
- A Socket AF 34 mm T50019-

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- Secure the twelve-point nut -A-.
- With the nut offset by 120°, move it into the output flange depressions -B- -arrows-.



# Radial Run-Out on Output Flange/Shaft Bevel Gear, Measuring

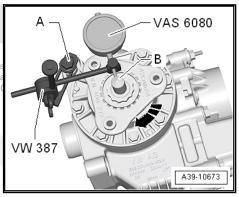
- Check the radial run-out on the shaft bevel gear alignment pin after tightening the output flange nut.
- Fasten the measuring tools to the bevel box using a M8 x 25 purpose bolt -item a-. with respect to the correctness of information in this document.
- Position the Dial Indicator VAS 6080A- on the shaft bevel gear alignment pin -B- and set it to "0" with 1 mm pre-ten-
- Turn the output flange one complete rotation -arrow-.
- Read the measured value on the dial gauge.
- Radial run-out: maximum 0.05 mm.
- Install the bevel box. Refer to <u>⇒ "4.3 Bevel Box, Installing"</u>, <u>page 90</u>.
- Gear Oil, Checking Level. Refer to ⇒ "3.1 Gear Oil, Checking Level", page 124.

#### **Tightening Specifications**

◆ Refer to ⇒ "4.1 Overview - Bevel Box Components", page 129

#### 4.6.2 Output Flange, Removing and Installing, 0FN

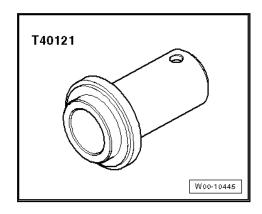
Characteristics of the bevel box. Refer to ⇒ "1.2 Bevel Box Identification", page 2.



## Special tools and workshop equipment required



- Holding Fixture VW313-
- Gearbox Support T10108-
- Three-Arm Puller (Kukko 45/2) VAS 251 205-
- Puller Crankshaft/Power Steering Seal T20143-
- Chain Tensioner Locking Tool T40265-
- Bearing Installer Differential Bearing 40-21-
- Seal Installer Side Shaft T40121-



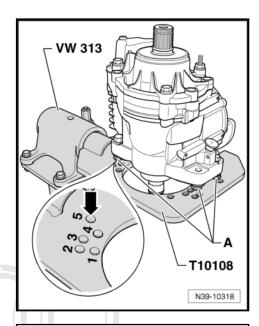
- Sealing Grease G 052 128 A1-
- Refer to the ⇒ Electronic Parts Catalog (ETKA) for the correct locking fluid.
- ♦ M10 x 30 bolt (quantity: 2)
- ♦ M12 x 10 nut (quantity: 4)

# Removing

- The bevel box is removed. Refer to ⇒ "4.2 Bevel Box, Removing", page 86.
- Place the bevel box on the hole -arrow- marked with the number -5- in the Gearbox Support - T10108-.

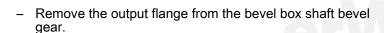
A - Insert the M12 x 10 nut (quantity: 4) between bevel box and Transmission Holder. The nuts act as spacers.

- Align the bevel box to the hole that is opposite it and secure.
- Drain the gear oil from the bevel box. Refer to ⇒ "3.2 Gear Oil, Draining and Filling", page 124.
- Pivot the bevel box so that the output flange faces upward.

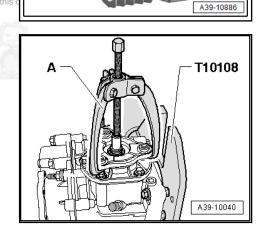


Remove the circlip -1- and the washer -2-.

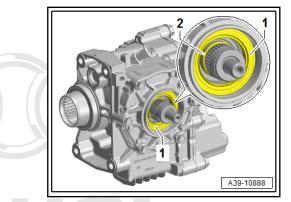




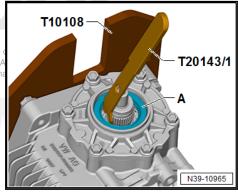




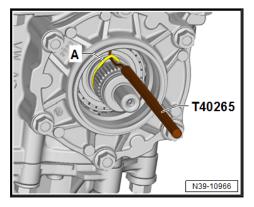
Replace the seal -1- and O-ring -2-.



- Pry out the output shaft seal -A-.
- The seal in the housing must not be damaged.
- Clean the area around the shaft bevel gear of seal residue for private permitted unless authorised by AUDI AG. with respect to the correctness of inform

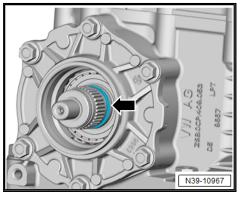


Remove the O-ring -A- from the shaft.

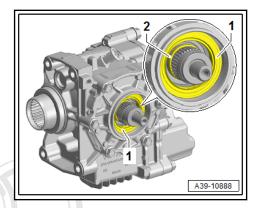


# Installing

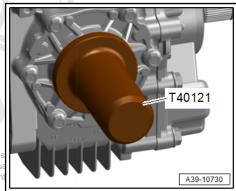
- Apply the O-ring -arrow- on the shaft.
- The O-ring must be located behind the splines in the bottom of the surrounding groove -arrow-.



Coat the outer circumference of the new shaft seal -1- with transmission fluid.

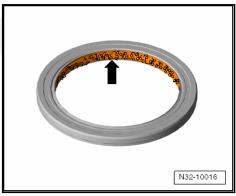


- Use the Seal Installer - Side Shaft - T40121- to drive the seal all the way in.

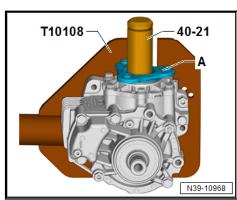


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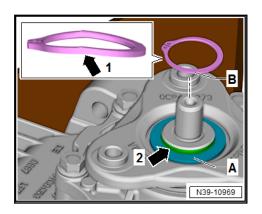
Fill the space between the sealing/dust lip halfway with Sealing Grease - G 052 128 A1- .



Drive in the output flange -A- carefully using a plastic mallet on the shaft.



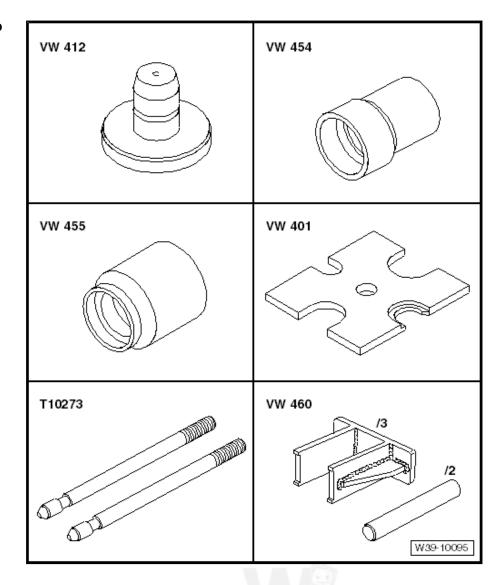
- Install the washer -A-.
- Secure the output flange using the circlip -B-.
- The circlip -B- has an uneven shape -arrow 1-.
- The circlip -B- must be located in the base of the surrounding groove -arrow 2-.
- Fill the gear oil. Refer to ⇒ "3.2 Gear Oil, Draining and Filling", page 124



#### Output Flange, Removing and Instal-4.6.3 ling, 0AV and 0FV

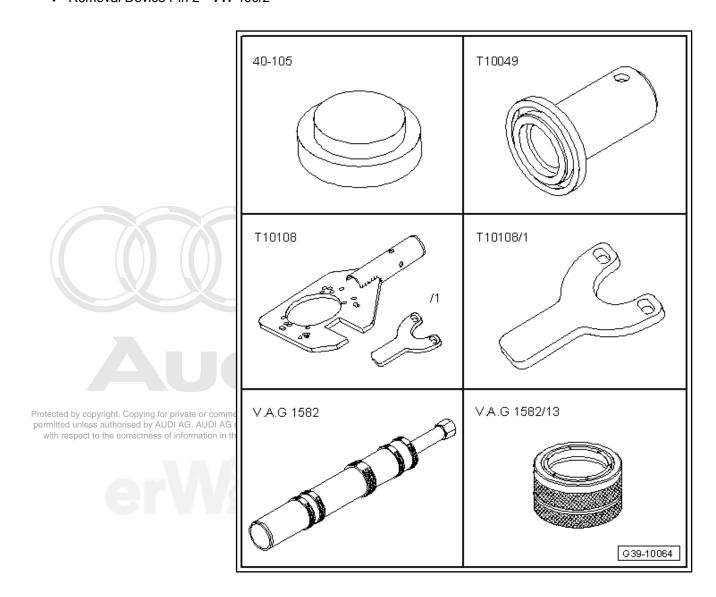
Characteristics of the bevel box. Refer to ⇒ "1.2 Bevel Box Identification", page 2.

# Special tools and workshop equipment required



- Press Piece Multiple Use VW 412-
- Press Piece Multiple Use VW 454-

- Press Piece Multiple Use VW 455-
- Press Plate VW 401-
- Two M8 x 30 mm stud bolts or Guide Pins M8 T10273-
- Removal Device Pin 2 VW 460/2-



- ♦ Press Piece Multiple Use 40 105-
- ♦ Seal Installer Flange Shaft T10049-
- ♦ Gearbox Support T10108-
- ♦ Gearbox Support T10108/1-
- ◆ Puller Taper Roller Bearing V.A.G 1582-
- ◆ Puller Taper Roller Bearing Adapter 13 V.A.G 1582/13-

◆ Dial Indicator Holder - VW 387-



◆ Torque Wrench 1601 - V.A.G 1601-

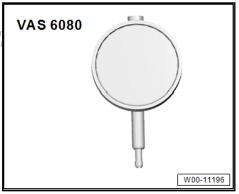


♦ Three-Arm Puller (Kukko 45/2) - VAS 251 205-



◆ Dial Indicator - VAS 6080A-

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- ♦ Sealing Grease G 052 128 A1-
- ♦ M10 x 30 bolts (quantity: 2)
- ◆ M12 x 10 nuts (quantity: 4)
- ◆ Pay attention to the different versions of the bevel box. Refer to ⇒ "1.2 Bevel Box Identification", page 2.



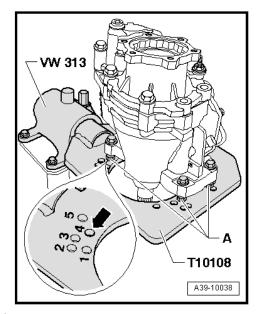
- A inner race/tapered roller bearing is pressed onto the bevel box output flange.
- This is removed later in the procedure.
- Do not replace the tapered roller bearing for the bevel box output flange and the shims.
- Tightening specifications. Refer to  $\Rightarrow$  "4.1.3 Overview Bevel Box Components, 0AV and 0FV", page 133 .

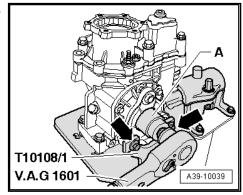
#### Remove the seal for the output flange

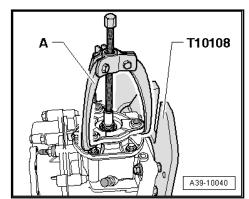
- Remove the bevel box. Refer to ⇒ "4.2 Bevel Box, Removing", page 86
- Place the bevel box on the hole -arrow- marked with "4" in the Gearbox Support - T10108- by placing M12 x 10 nuts -item A- between the bevel box and the transmission holder.
- Align the bevel box with the remaining three holes and secure it with the nut -A-.
- Place an oil collection device underneath, for example Shop Crane - Drip Tray - VAS 6208- .
- Drain the gear oil from the bevel box.



- Lock the beyel box output flange using the Gearbox Support liability Stop Plate of T10108/1 py installing the two M10 x 30 bolts AG. -arrows-.
- Remove the output flange nut.
- A 36 mm Socket for 3/4 Drive
- Pivot the bevel box so that the output flange faces upward.
- Remove the output flange from the bevel box shaft bevel
- A Three-Arm Puller (Kukko 45/2) VAS 251 205-

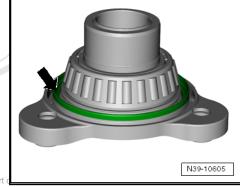






When removing the output flange the tapered bearing inner race and the seal -arrow- remain on the output flange.

Remove the seal as follows:

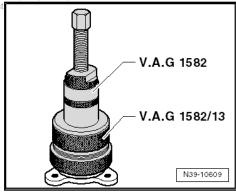


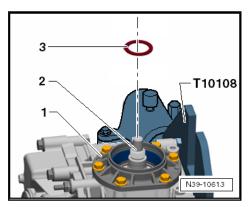
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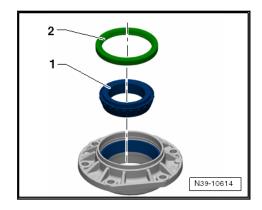
- When removing the output flange seal, the inner race/tament. Copyright pered roller bearing must also be removed.
- Place the Press Piece Multiple Use 40-105- on the output flange.
- Remove the tapered roller bearing inner race from the output flange using the Taper Roller Bearing Extractor V.A.G 1582A- and Puller - Taper Roller Bearing - Adapter 13 -V.A.G 1582/13- .
- Remove the output flange seal.

# Install the output flange seal

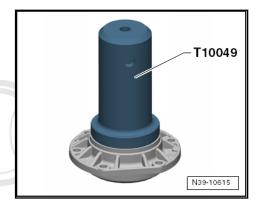
- First remove the pinion housing -1- along with the shaft bevel gear -2- in order to install the seal.
- Remove the bolts for the pinion housing -1-; and carefully remove the pinion housing diagonally off the protruding edges.
- Remove the pinion housing and the shaft bevel gear -2-.
- Clean the thread on the shaft bevel gear.
- If the shim -3- was also removed when removing the output flange, it must be reinstalled in the pinion housing.
- This will maintain the bearing pre-load on the shaft bevel gear inside the pinion housing.
- Place the old inner race/tapered roller bearing -1- into the pinion housing.
- Lightly lubricate the outer diameter of the new output flange seal -2-.





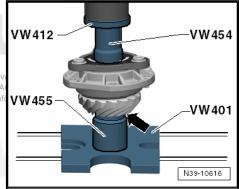


- Drive in the new seal using the Seal Installer Flange Shaft -T10049- .
- The seal must be flush with the upper edge of the housing.
- Fill the space between the sealing and dust lip of the seal halfway with Sealing Grease - G 052 128 A1-



- Press the output flange all the way in along with the pinion housing and shaft bevel gear.
- The shoulder -arrow- of the Press Piece Multiple Use VW 455- points to the shaft bevel gear.

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- Install the M8 X 30 mm stud bolts = -A- or Guide Pins M8 -T10273- in the axle drive housing.
- Slide a new O-Ring -1- onto the pinion housing -2-.

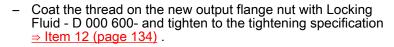
The pinion housing -2- and shim -3- only fit in one position.

- Install the previous shim -3-.
- Carefully install the pinion housing diagonally all the way with Removal Device Pins 2 - VW 460/2-.

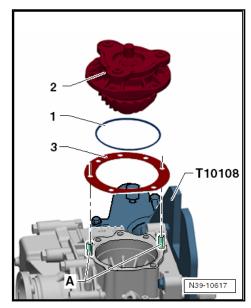
There is very little space between the pinion housing and the bevel box housing.

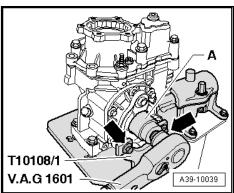
The gap is closed when the pinion housing is tightened.

Tighten the bolts for the pinion housing -2- diagonally to the tightening specification ⇒ Item 18 (page 135).



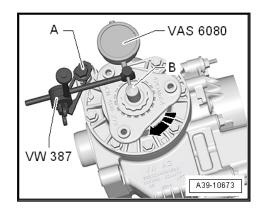
A - 36 mm Socket for 3/4 Drive





# Radial Run-Out on Output Flange/Shaft Bevel Gear, Measuring

- Check the radial run-out on the shaft bevel gear alignment pin after tightening the output flange nut.
- Secure measuring tools to bevel box with bolt -A- (M8 x 25 mm).
- Position the Dial Gauge for example Dial Indicator VAS 6080A- on the shaft bevel gear alignment pin -B- and set it to "0" with 1 mm pre-tension.
- Turn the output flange one complete rotation -direction of the arrow-.
- Read the measured value on the Dial Gauge .
- Maximum radial run-out = 0.05 mm.
- Install the bevel box. Refer to <u>⇒ "4.3 Bevel Box, Installing"</u>,
- Check the gear oil level in bevel box. Refer to ⇒ "3.1 Gear Oil, Checking Level", page 124





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- 5 **Transmission Control**
- ⇒ "5.1 Component Location Overview Transmission Control", page 161
- **Component Location Overview Transmission Control** 5.1



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#### 1 - Brake Lamp Switch - F- / Brake Pedal Switch - F63-

- On the brake master cylinder
- Overview. Refer to ⇒ Brake System; Rep. Gr. 47; Brake Booster/Brake Master Cylinder: Overview - Brake Booster/Brake Master Cylinder

#### 2 - Dual-Clutch Transmission Mechatronic - J743-

- Bolted to the front of the transmission housing.
- Overview. Refer to ⇒ 1.1 Overview - Mechatronic", page 24.

## 3 - Transmission Input Speed Sensor - G182- / Clutch Oil Temperature Sensor - G509-

Not for this model

# 4 - Shift Mechanism

- With the following integrated components:
- Selector Lever E313-
- Selector Lever Sensor System Control Module -J587-
- Selector Lever Park Position Lock Switch - F319-
- Shift Lock Solenoid -N110-
- 5 6 3 2 8 A39-10672
- ☐ The components cannot be replaced separately if faulty.
- ☐ Check using Guided Fault Finding on the ⇒ Vehicle diagnostic tester.
- ☐ Removing and Installing. Refer to ⇒ "2.6 Shift Mechanism, Removing and Installing", page 43.

# 5 - Selector Lever Transmission Range Position Display Unit - Y26-

Different versions

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Component Location Overview. Refer to Selectrical Equipment; Repu Gracu96; Lamps; Component Location Overview - Lamps in Center Console

## 6 - Transmission Range Display - Y6-

- Integrated in the instrument cluster
- Cannot be replaced separately
- □ Instrument cluster overview. Refer to ⇒ Electrical Equipment; Rep. Gr. 90; Instrument Cluster; Overview - Instrument Cluster .

#### 7 - Kick Down Switch

- A programmed value for the Accelerator Pedal Position Sensor G79- / Accelerator Pedal Position Sensor 2 - G185- (integrated in the accelerator pedal module) is saved in the engine control module as a kick-down signal.
- Signal transmitted from engine control module to transmission control module via the CAN bus.
- □ Overview. Refer to ⇒ Fuel Supply System; Rep. Gr. 20; Accelerator Mechanism; Overview Accelerator Pedal Module.

#### 8 - Diagnostic Connection



٥	☐ For the Vehicle Diagnostic Tester☐ In the driver footwell								
	Check	all of	the lis	ted components using the ⇒	Vehicle of	diagnostic tester in	Guided	Fault	Finding.



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# **Cautions & Warnings**

Please read these WARNINGS and CAUTIONS before proceeding with maintenance and repair work. You must answer that you have read and you understand these WARNINGS and CAUTIONS before you will be allowed to view this information.

- If you lack the skills, tools and equipment, or a suitable workshop for any procedure described
  in this manual, we suggest you leave such repairs to an authorized Audi retailer or other
  qualified shop. We especially urge you to consult an authorized Audi retailer before beginning
  repairs on any vehicle that may still be covered wholly or in part by any of the extensive
  warranties issued by Audi.
- Disconnect the battery negative terminal (ground strap) whenever you work on the fuel system
  or the electrical system. Do not smoke or work near heaters or other fire hazards. Keep an
  approved fire extinguisher handy.
- Audi is constantly improving its vehicles and sometimes these changes, both in parts and specifications, are made applicable to earlier models. Therefore, part numbers listed in this manual are for reference only. Always check with your authorized Audi retailer parts department for the latest information.
- Any time the battery has been disconnected on an automatic transmission vehicle, it will be necessary to reestablish Transmission Control Module (TCM) basic settings using the Audi Factory Approved Scan Tool (ST).
- Never work under a lifted vehicle unless it is solidly supported on stands designed for the sal purposes, in part or in whole, is not purpose. Do not support a vehicle on cinder blocks, hollow-tipes of hottles proper that may his document. Copyright by AUDI AG. crumble under continuous load. Never work under a vehicle that is supported solely by a jack.
   Never work under the vehicle while the engine is running.
- For vehicles equipped with an anti-theft radio, be sure of the correct radio activation code
  before disconnecting the battery or removing the radio. If the wrong code is entered when the
  power is restored, the radio may lock up and become inoperable, even if the correct code is
  used in a later attempt.
- If you are going to work under a vehicle on the ground, make sure that the ground is level. Block the wheels to keep the vehicle from rolling. Disconnect the battery negative terminal (ground strap) to prevent others from starting the vehicle while you are under it.
- Do not attempt to work on your vehicle if you do not feel well. You increase the danger of
  injury to yourself and others if you are tired, upset or have taken medicine or any other
  substances that may impair you or keep you from being fully alert.
- Never run the engine unless the work area is well ventilated. Carbon monoxide (CO) kills.
- Always observe good workshop practices. Wear goggles when you operate machine tools or work with acid. Wear goggles, gloves and other protective clothing whenever the job requires working with harmful substances.
- Tie long hair behind your head. Do not wear a necktie, a scarf, loose clothing, or a necklace
  when you work near machine tools or running engines. If your hair, clothing, or jewelry were to
  get caught in the machinery, severe injury could result.

# **Cautions & Warnings**

- Do not re-use any fasteners that are worn or deformed in normal use. Some fasteners are
  designed to be used only once and are unreliable and may fail if used a second time. This
  includes, but is not limited to, nuts, bolts, washers, circlips and cotter pins. Always follow the
  recommendations in this manual replace these fasteners with new parts where indicated,
  and any other time it is deemed necessary by inspection.
- Illuminate the work area adequately but safely. Use a portable safety light for working inside or under the vehicle. Make sure the bulb is enclosed by a wire cage. The hot filament of an accidentally broken bulb can ignite spilled fuel or oil.
- Friction materials such as brake pads and clutch discs may contain asbestos fibers. Do not create dust by grinding, sanding, or by cleaning with compressed air. Avoid breathing asbestos fibers and asbestos dust. Breathing asbestos can cause serious diseases such as asbestosis or cancer, and may result in death.
- Finger rings should be removed so that they cannot cause electrical shorts, get caught in running machinery, or be crushed by heavy parts.
- Before starting a job, make certain that you have all the necessary tools and parts on hand.
   Read all the instructions thoroughly, do not attempt shortcuts. Use tools that are appropriate to the work and use only replacement parts meeting Audi specifications. Makeshift tools, parts and procedures will not make good repairs.
- Catch draining fuel, oil or brake fluid in suitable containers. Do not use empty food or beverage containers that might mislead someone into drinking from them. Store flammable fluids away from fire hazards. Wipe up spills at once, but do not store the oily rags, which can ignite and burn spontaneously.
- Use pneumatic and electric tools only to loosen threaded parts and fasteners. Never use these
  tools to tighten fasteners, especially on light alloy parts. Always use a torque wrench to tighten
  fasteners to the tightening torque listed.
- Keep sparks, lighted matches, and open flame away from the top of the battery. If escaping
  hydrogen gas is ignited, it will ignite gas trapped in the cells and cause the battery to explode.
- Be mindful of the environment and ecology. Before you drain the crankcase, find out the
  proper way to dispose of the oil. Do not pour oil onto the ground, down a drain, or into a
  stream, pond, or lake. Consult local ordinances that govern the disposal of wastes.
- The air-conditioning (A/C) system is filled with a chemical refrigerant that is hazardous. The A/C system should be serviced only by trained automotive service technicians using approved refrigerant recovery/recycling equipment, trained in related safety precautions, and familiar with regulations governing the discharging and disposal of automotive chemical refrigerants.

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- Before doing any electrical welding on vehicles equipped with anti-lock brakes (ABS), right by AUDI AG. disconnect the battery negative terminal (ground strap) and the ABS control module connector.
- Do not expose any part of the A/C system to high temperatures such as open flame.
   Excessive heat will increase system pressure and may cause the system to burst.

# **Cautions & Warnings**

- When boost-charging the battery, first remove the fuses for the Engine Control Module (ECM), the Transmission Control Module (TCM), the ABS control module, and the trip computer. In cases where one or more of these components is not separately fused, disconnect the control module connector(s).
- Some of the vehicles covered by this manual are equipped with a supplemental restraint system (SRS), that automatically deploys an airbag in the event of a frontal impact. The airbag is operated by an explosive device. Handled improperly or without adequate safeguards, it can be accidentally activated and cause serious personal injury. To guard against personal injury or airbag system failure, only trained Audi Service technicians should test, disassemble or service the airbag system.
- Do not quick-charge the battery (for boost starting) for longer than one minute, and do not
  exceed 16.5 volts at the battery with the boosting cables attached. Wait at least one minute
  before boosting the battery a second time.
- Never use a test light to conduct electrical tests of the airbag system. The system must only
  be tested by trained Audi Service technicians using the Audi Factory Approved Scan Tool (ST)
  or an approved equivalent. The airbag unit must never be electrically tested while it is not
  installed in the vehicle.
- Some aerosol tire inflators are highly flammable. Be extremely cautious when repairing a tire
  that may have been inflated using an aerosol tire inflator. Keep sparks, open flame or other
  sources of ignition away from the tire repair area. Inflate and deflate the tire at least four times
  before breaking the bead from the rim. Completely remove the tire from the rim before
  attempting any repair.
- When driving or riding in an airbag-equipped vehicle, never hold test equipment in your hands or lap while the vehicle is in motion. Objects between you and the airbag can increase the risk of injury in an accident.

I have read and I understand these Cautions and Warnings.



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